McGill University Libraries
3 100 785 297 4



In Memoriam.

While this calendar was passing through the press, the Venerable Chancellor of the University was removed by death, on May 30th, 1888, in the 88th year of his age. The Honourable JAMES FERRIER, Senator, and member of the Legislative Council of the Province of Quebec, was appointed a member of the Board of the Royal Institution for the Advancement of Learning in 1845, and was elected President of the Royal Institution in 1846. On the reconstruction of the Board under the amended charter in 1852, he voluntarily resigned the Presidency in favor of the Honourable Mr. Justice Day, then recently appointed on the Board, and was re-elected as President and Chancellor, on the decease of Judge Day, in 1884. He was also for many years a member of the Council of Public Instruction for the Province of Quebec. Throughout the long period of his connection with McGill University, Mr. Ferrier took an active and influential part in every effort on its behalf, and was always ready to contribute of his pecuniary means, and of his time, thought and influence to the furtherance of its interests, as well as those of education in general. At the same time, in addition to his more prominent public duties, he was a leading spirit in many religious and benevolent enterprises. No man has earned a higher title to the gratitude of his countrymen.

ANNUAL CALENDAR

OF

McGILL COLLEGE

AND

UNIVERSITY,

MONTREAL.

FOUNDED UNDER BEQUEST OF THE HON. JAMES McGILL,
ERECTED INTO A UNIVERSITY BY ROYAL CHARTER
IN 1821, AND RE-ORGANIZED BY AN
AMENDED CHARTER IN 1852.

SESSION 1888-9.

Montreal:
PRINTED FOR THE UNIVERSITY BY JOHN LOVELL & SON.

1888.

LE3
M2
1888-89
34383

The *Examination Papers* of the Session 1887-88 are published separately, and may be purchased of the Secretary, or through booksellers.

Governing Body of the University.

VISITOR:

HIS EXCELLENCY THE RIGHT HONOURABLE LORD STANLEY OF PRESTON, G.C.B., P.C.,

GOVERNOR GENERAL OF CANADA, &C.

GOVERNORS:

[*Being the Members of the Royal Institution for the Advancement of Learning.*]

PETER REDPATH, ESQ.
JOHN H. R. MOLSON, ESQ.
THE HON. SIR ALEXANDER T. GALT, G.C.M.G., LL.D. (Hon. Edin.).
JOHN MOLSON, ESQ.
JOSEPH HICKSON, ESQ.
THE HON. JOHN J. C. ABBOTT, D.C.L., Q.C.
WILLIAM C. McDONALD, ESQ.
HUGH McLENNAN, ESQ.
GEORGE HAGUE, ESQ.
THE HON. SIR DONALD A. SMITH, K.C.M.G., LL.D. (Hon. Cantab.)
EDWARD B. GREENSHIELDS, B.A.
SAMUEL FINLEY, ESQ.
THE HON. L. RUGGLES CHURCH, M.D.
ANDREW FREDERICK GAULT, ESQ.

(The Board of Governors has, under the Royal Charter, the power to frame Statutes, to make Appointments, and to administer the Finances of the University.)

PRINCIPAL.

SIR WILLIAM DAWSON, C.M.G., M.A., LL.D., F.R.S., *Vice-Chancellor.*

(The Principal has, under the Statutes, the general superintendence of all affairs of the College and University, under such regulations as may be in force.)

FELLOWS:

ALEXANDER JOHNSON, M.A., LL.D., Vice-Principal and Dean of the Faculty of Arts.
HENRY ASPINWALL HOWE, LL.D., Governors' Fellow.
REV. JOHN COOK, D.D., Principal of Morrin College, Quebec.

84383.

REV. GEORGE CORNISH, M.A., LL.D., Elective Fellow, Faculty of Arts.
REV. D. H. MACVICAR, D.D., LL.D., Principal of the Presbyterian College, Montreal.
JOHN REDPATH DOUGALL, M.A., Representative Fellow in Arts.
REV. J. CLARK MURRAY, LL.D., Elective Fellow, Faculty of Arts.
HENRY T. BOVEY, M.A., C.E., Dean of the Faculty of Applied Science.
BERNARD J. HARRINGTON, B.A., Ph. D., F.G.S., Elective Fellow, Fac. App. Science.
REV. E. I. REXFORD, B.A., Governors' Fellow.
REV. JOHN JENKINS, D.D., LL.D., Governors' Fellow.
REV. CANON HENDERSON, M.A., D.D. (Dublin), Principal of the Montreal Diocesan Theological College.
REV. GEORGE DOUGLASS, LL.D., Principal of the Montreal Wesleyan Theological College.
J. S. ARCHIBALD, M.A., D.C.L., Elective Fellow, Faculty of Law.
GEORGE ROSS, M.A., M.D., Elective Fellow, Faculty of Medicine.
JOHN S. HALL, B.A., B.C.L., Representative Fellow in Law.
REV. R. W. NORMAN, M.A., D.C.L., Governors' Fellow.
R. P. HOWARD, M.D., LL.D., Dean of Faculty of Medicine.
S. P. ROBINS, M.A., LL.D., Principal of McGill Normal School.
FREDERICK W. KELLEY, B.A., Ph.D. (Cornell), Representative Fellow in Arts.
REV. JAMES BARCLAY, M.A (Glasgow), Governors' Fellow.
ROBERT CRAIK, M.D., Representative Fellow in Medicine.
A. W. BANNISTER, M.A., (Victoria), Principal of St. Francis College.
THOMAS A. ROGERS, M.D., Representative Fellow in Medicine.
JEFFREY H. BURLAND, B.A. Sc., Representative Fellow in App. Science.
MATTHEW HUTCHINSON, D.C.L., Representative Fellow in Law.
WILFRED T. SKAIFE, B.A. Sc., Representative Fellow in App. Science.
REV. WILLIAM M. BARBOUR, D.D. (Yale, U.S.), Principal of the Congregational College of British North America.
N. W. TRENHOLME, M.A., D.C.L., Dean of the Faculty of Law.

(The Governors, Principal and Fellows constitute, under the Charter, the Corporation of the University, which has the power, under the Statutes, to frame regulations touching the Courses of Study, Matriculation, Graduation and other Educational matters; and to grant Degrees.)

OFFICE OF SECRETARY, REGISTRAR AND BURSAR:—

[*And Secretary of the Royal Institution.*]

JAMES W. BRAKENRIDGE, B.C.L., Acting Secretary, Office East Wing, McGill College; Residence, 117 Shuter Street.

OFFICE HOURS: 9 TO 5.

Professors Emeriti.

[*Retaining their Rank and Titles, but retired from the active work of Instruction.*]

HENRY ASPINWALL HOWE, LL.D.
Emeritus Professor in the Faculty of Arts.

WILLIAM WRIGHT, M.D.
Emeritus Professor in the Faculty of Medicine.

HON. WILLIAM BADGLEY, D.C.L.
Emeritus Professor in the Faculty of Law.

HON. R. G. LAFLAMME, D.C.L., Q.C.
Emeritus Professor in the Faculty of Law.

D. C. McCALLUM, M.D.
Emeritus Professor in the Faculty of Medicine.

ROBERT CRAIK, M.D.
Emeritus Professor in the Faculty of Medicine.

HON. J. S. C. WURTELE, D.C.L., Q.C.
Emeritus Professor in the Faculty of Law.

HON. H. F. RAINVILLE, LL.D. (Laval.)
Emeritus Professor in the Faculty of Law.

Officers of Instruction.

SIR WILLIAM DAWSON, M.A., LL.D., F.R.S., C.M.G.
Principal, Logan Professor of Geology and Professor of Natural History. East Wing, McGill College

ROBERT P. HOWARD, M.D., LL.D.
Dean of the Faculty of Medicine, Professor of the Theory and Practice of Medicine. 47 Union Avenue.

CHARLES F. A. MARKGRAF, M.A.
Professor of German Language and Literature. McGill College.

ALEXANDER JOHNSON, M.A., LL.D. (Trin. Col. Dublin.)
Professor of Mathematics, and Peter Redpath Professor of Natural Philosophy, Vice-Principal and Dean of the Faculty of Arts. 5 Prince of Wales Terrace.

REV. GEORGE CORNISH, M.A., LL.D.
Hiram Mills Professor of Classical Literature.—Honorary Librarian. 177 Drummond Street.

PIERRE J. DAREY, M.A., B.C.L., LL.D., *Officier d' Academie.*
Professor of French Language and Literature. 39 McGill College Av.

G. E. FENWICK, M.D.
Professor of Surgery. 1404 St. Catherine Street.

N. W. TRENHOLME, M.A., D.C.L.
Dean of the Faculty of Law, and Professor of International Law. Dorchester Av., Cote St. Antoine.

GILBERT P. GIRDWOOD, M.D.
Professor of Chemistry, Faculty of Medicine. 55 Beaver Hall Hill.

REV. J. CLARK MURRAY, LL.D. (Glasgow).
Professor of Logic, and John Frothingham Professor of Mental and Moral Philosophy. 111 Mackay Street.

GEORGE ROSS, M.A., M.D.
Professor of Clinical Medicine. 49 Union Avenue.

BERNARD J. HARRINGTON, B.A., Ph.D., F.G.S.
David Y. Greenshields Professor of Chemistry and Mineralogy, and Lecturer in Assaying and Mining. Wallbrae Pl., off 256 Univ. St.

THOMAS G. RODDICK, M.D.
Professor of Clinical Surgery. 80 Union Avenue.

WILLIAM GARDNER, M.D.
Professor of Gynæcology. 109 Union Avenue.

HENRY T. BOVEY, M.A., A.M.I.C.E., M.I.M.E., Fellow Queen's College, Cambridge.
Dean of the Faculty of Applied Science, Professor of Civil Engineering and Applied Mechanics. 31 Ontario Avenue.

CHARLES E. MOYSE, B.A. (London).
Molson Professor of English Language and Literature, Lecturer in History. 802 Sherbrooke.

JOHN S. ARCHIBALD, M.A., D.C.L.
Professor of Criminal and Constitutional Law. 113 Mackay.

EDMOND LAREAU, D.C.L.
Professor of Legal History. 194 St. Denis Street.

MATTHEW HUTCHINSON, D.C.L.
Professor of Roman Law. Olivier Street, Cote St. Antoine.

J. EMERY ROBIDOUX, D.C.L.
Professor of Real Estate Law. 216 St. Denis Street.

C. H. McLEOD, Ma.E.
Professor of Descriptive Geometry and Superintendent of Meteorological Observatory. Observatory McGill College.

LEONIDAS HEBER DAVIDSON, M.A., D.C.L.
Professor of Commercial Law. 17 St. Luke Street, or 194 St. James.

FRANCIS J. SHEPHERD, M.D.
Professor of Anatomy. 85 Mansfield Street.

FRANK BULLER, M.D.
Professor of Ophthalmology and Otology. 838 Dorchester Street.

JAMES STEWART, M.D.
Professor of Materia Medica and Therapeutics. 873 Dorchester Street.

GEORGE WILKINS, M.D.
Professor of Medical Jurisprudence and Lecturer in Histology. 898 Dorchester Street.

D. P. PENHALLOW, B. Sc. (Amherst, U.S.)
Professor of Botany. McGill College.

G. H. CHANDLER, M.A.
Professor of Practical Mathematics in Faculty of Applied Science, Lecturer in Mathematics Faculty of Arts, and Assistant Superintendent of Observatory. 32 Lorne Avenue.

RICHARD L. MACDONNELL, B.A., M.D.
Professor of Hygiene and Demonstrator of Anatomy. 117 Metcalf Street.

T. WESLEY MILLS, M.A., M.D.
Professor of Physiology. McGill College.

JAMES C. CAMERON, M.D.
Professor of Midwifery and Diseases of Children. 43 Belmont Street.

REV. DANIEL COUSSIRAT, B.A., *Officier d' Academie.*
Professsor of Hebrew and Oriental Literature. 106 Shuter Street.

A. J. EATON, M.A., Ph.D., (Leipsic.)
Assistant Professor of Classics. 49½ Durocher Street.

ARCHIBALD McGOUN, B.A., B.C.L.
Professor of Civil Procedure. 115 Mansfield Street.

LEWIS A. HART, M.A., B.C.L.
Lecturer on the Theory and Practice of Notarial Deeds and Proceedings. 1679 St. Catherine Street

PAUL T. LAFLEUR, M.A.
Lecturer in Logic and English. 2189 St. Catherine Street.

WILLIAM R. SUTHERLAND, M.D.
Curator of Medical Museum and Asst. Dem. of Anatomy. 764 Sherbrooke Street.

JOHN ANDREW. *Instructor in Elocution.*	64 Roy Street.
GEORGE W. MAJOR, B.A., M.D. *Instructor in Laryngology.*	82 Union Avenue.
ALEXANDER D. BLACKADER, B.A., M.D. *Instructor in Diseases of Children.*	70 Beaver Hall Hill.
ROBERT J. B. HOWARD, B.A., M.D. *Assistant Demonstrator of Anatomy.*	47 Union Avenue.
WYATT G. JOHNSTON, M.D. *Demonstrator of Pathology.*	McGill College.
R. T. RUTTAN, B.A., M.D. *Lecturer in Chemistry, Medical Faculty.*	McGill College.
JAMES BELL, M.D. *Assistant to Chair of Clinical Surgery.*	59 Beaver Hall Hill.
NEVIL N. EVANS, B.A., Sc. *Assistant to Professor of Chemistry, Arts and Applied Science.*	21 Milton Street.
T. JOHNSON ALLOWAY, M.D., L.R.C.S., L.R.C.P. (Edinburgh). *Instructor in Gynæcology.*	934 Dorchester Street.

LIBRARY.

Library Assistant, Mr. H. Mott, Library, McGill College.

General Statement.

SESSION OF 1888-9.

The Fifty-sixth Session of the University, being the Thirty-fifth under the amended Charter, will commence in the Autumn of 1888.

By Virtue of the Royal Charter, granted in 1821 and amended in 1852, the Governors, Principal and Fellows of McGill College constitute the Corporation of the University ; and, under the Statutes framed by the Board of Governors, with approval of the Visitor, have the power of granting Degrees in all the Arts and Faculties, in McGill College, and Colleges affiliated thereto.

The Statutes and Regulations of the University have been framed on the most liberal principles, with the view of affording to all classes of persons the greatest possible facilities for the attainment of mental culture and professional training. In its religious character the University is Protestant, but not denominational ; and while all possible attention will be given to the character and conduct of students, no interference with their peculiar religious views will be sanctioned.

The educational work of the University is carried on in McGill College, Montreal, and in the Affiliated Colleges and Schools.

I. McGILL COLLEGE.

THE FACULTY OF ARTS.—The complete course of study extends over four Sessions, of eight months each ; and includes Classics and Mathematics, Experimental Physics, English Literature, Logic, Mental and Moral Science, Natural Science, and one Modern Language or Hebrew. The course of study is, with few exceptions, the same for all students in the first two years ; but in the third and fourth years extensive options are allowed, more especially in favour of the Honour Courses in Classics, Mathematics, Mental and Moral Science, Natural Science, English Literature and Modern Languages. Certain exemptions are also allowed to professional Students. The course of study leads to the Degrees of B.A., M.A., and LL.D.

THE DONALDA SPECIAL COURSE IN ARTS provides for the education of women, in separate classes, with course of study, exemptions and honours similar to those for men.

THE FACULTY OF APPLIED SCIENCE provides a thorough professional training, extending over three or four years, in Civil Engineering, Mechanical Engineering, Mining Engineering and Assaying, and Practical Chemistry, leading to the Degrees of Bachelor of Applied Science, Master of Engineering, and Master of Applied Science.

THE FACULTY OF MEDICINE.—The complete course of study in Medicine extends over four Sessions, of six months each, and one Summer Session of three months in the third Academic Year, and leads to the Degree of M.D., C.M.

THE FACULTY OF LAW.—The complete course in Law extends over three Sessions, of six months each, and leads to the Degrees of B.C.L. and D.C.L.

II. AFFILIATED COLLEGES.

Students of Affiliated Colleges are matriculated in the University, and may pursue their course of study wholly in the Affiliated College, or in part in McGill College, and may come up to the University Examinations on the same terms with the Students of McGill College.

MORRIN COLLEGE, *Quebec*.—Is affiliated in so far as regards Degrees in Arts and Law.

[Detailed information may be obtained from REV. JOHN COOK, D.D., Principal.]

St. Francis College, *Richmond.*—Is affiliated in so far as regards the Intermediate Examinations in Arts.

[Detailed information may be obtained from Principal Bannister, B.A., Richmond, P.Q.]

III. AFFILIATED THEOLOGICAL COLLEGES.

Affiliated Theological Colleges have the right of obtaining for their Students the advantage, in whole or in part, of the course of study in Arts, with such facilities in regard to exemptions as may be agreed on, and a number of Free Tuitions are granted by the Board of Governors to the Students of these Colleges, when matriculated in Arts.

The Congregational College of British North America, *Montreal.* Principal, Rev. William M. Barbour, D.D., 58 McTavish St.

The Presbyterian College, Montreal, in connection with the Presbyterian Church in Canada. Principal, Rev. D. H. MacVicar, D.D., LL.D., 69 McTavish St.

The Diocesan College of Montreal. Principal, Rev. Canon Henderson, M.A., D.D., 896 Dorchester St.

The Wesleyan College of Montreal. Principal, Rev. George Douglass, LL.D., 228 University St.

[Calendars of the above Colleges and all necessary information may be obtained on application to their Principals.]

IV. McGILL NORMAL SCHOOL.

The McGill Normal School provides the training requisite for Teachers of Elementary and Model Schools and Academies. Teachers trained in this School are entitled to Provincial Diplomas, and may, on conditions stated in the announcement of the School, enter the classes in the Faculty of Arts for Academy Diplomas and for the degree of B.A. Principal, S. P. Robins, LL.D., 30 Belmont St., Montreal.

V. AFFILIATED HIGH SCHOOLS, ETC.

1. *By special vote of the Corporation and Governors.*

The Trafalgar Institute for the higher education of women, Simpson St., Montreal. Principal, Miss Grace Fairley.

The High School of Montreal, Metcalfe St. Principal, H. Aspinwall Howe, LL.D.

The Girls' High School of Montreal, Metcalfe St. Lady Principal, Mrs. H. H. Fuller.

Knowlton Academy, Knowlton, P.Q.

2. *Under the Regulation respecting Schools which have creditably prepared pupils for the diploma of Associate in Arts and for Matriculation.*

Prince of Wales College, Charlottetown, P.E.I.; Bishop's College School, Lennoxville; St. Francis College School; Lachute Academy; Misses Symmers and Smith's School, Montreal; Mrs. Watson's School, Montreal; Stanstead Wesleyan College; Inverness Academy; Huntingdon Academy; Waterloo Academy; Compton Ladies' College; Lincoln College, Sorel; Three Rivers Academy; Coaticook Academy; Clarenceville Academy; Shawville Academy; St. Johns High School; Quebec High School; Sutton Academy; Girls' High School, St. John, N.B.

ACADEMICAL YEAR 1888-89.

SEPTEMBER, 1888.

1 Saturday	
2 SUNDAY	
3 Monday	Normal School opens.
4 Tuesday	
5 Wednesday	Meeting of Normal School
6 Thursday	Committee.
7 Friday	
8 Saturday	
9 SUNDAY	
10 Monday	
11 Tuesday	
12 Wednesday	
13 Thursday	
14 Friday	
15 Saturday	
16 SUNDAY	
17 Monday	Mat. and Sup. Exn's in Classics Exhib. and Scholarship Exam.
18 Tuesday	Mat. and Sup. Ex'ns in Math's Exhib. & Scholarship Exam.
19 Wednesday	Mat. & Sup. Ex'ns in English, Logic, Men. and Mor. Phil. Exhib. and Sch. Exm'ns.
20 Thursday	Mat. & Sup. Ex'ns in Modern Lang's and Nat. Sc.; Exhib. and Sch. Exam'ns.
21 Friday	Exhib. and Sch. Ex'ns. Lect's in Arts and App. Sc. begin.
22 Saturday	Meeting of Governors.
23 SUNDAY	
24 Monday	Meeting of Faculty of Arts.
25 Tuesday	
26 Wednesday	
27 Thursday	Summer Essays in Applied Sc.
28 Friday	Matric. Exams. in Med. Register Med. Fac. opens.
29 Saturday	
30 SUNDAY	

OCTOBER, 1888.

1 Monday	Session of Medical and Law Faculties begins.
2 Tuesday	Meeting of Fac. of App. Sec.
3 Wednesday	Meeting Nor. Sch. Committee.
4 Thursday	
5 Friday	Meeting Faculty of Arts.
6 Saturday	Founder's Birthd'y. The William Molson Hall opened 1862.
7 SUNDAY	
8 Monday	
9 Tuesday	
10 Wednesday	
11 Thursday	
12 Friday	
13 Saturday	
14 SUNDAY	
15 Monday	
16 Tuesday	
17 Wednesday	
18 Thursday	
19 Friday	Meeting of Faculty of Arts.
20 Saturday	
21 SUNDAY	
22 Monday	Meeting of Museum Com.
23 Tuesday	Meeting of Library Com.
24 Wednesday	Regular Meeting of Corporation
25 Thursday	School Exam's app'd. Reps. on Schol. & Exh. Ac. audited.
26 Friday	
27 Saturday	Meeting of Governors.
28 SUNDAY	
29 Monday	
30 Tuesday	
31 Wednesday	

NOVEMBER, 1888.

1 Thursday	
2 Friday	Meeting of Faculty of Arts.
3 Saturday	
4 SUNDAY	
5 Monday	
6 Tuesday	Meeting of Fac. App. Science.
7 Wednesday	Meeting Normal School Com.
8 Thursday	
9 Friday	
10 Saturday	
11 SUNDAY	
12 Monday	
13 Tuesday	
14 Wednesday	
15 Thursday	
16 Friday	Meeting of Faculty of Arts.
17 Saturday	
18 SUNDAY	
19 Monday	
20 Tuesday	
21 Wednesday	
22 Thursday	
23 Friday	
24 Saturday	Meeting of Governors
25 SUNDAY	
26 Monday	
27 Tuesday	
28 Wednesday	
29 Thursday	
30 Friday	Meeting of Faculty of Arts.

DECEMBER, 1888.

1 Saturday	
2 SUNDAY	
3 Monday	
4 Tuesday	Meeting of Faculty of App. Sc.
5 Wednesday	Meeting of Nor. Sch. Comm.
6 Thursday	
7 Friday	
8 Saturday	
9 SUNDAY	
10 Monday	
11 Tuesday	
12 Wednesday	
13 Thursday	
14 Friday	Meeting of Fac. of Arts. Lectures in Arts and Ap. Sc. end.
15 Saturday	Exam. Bot. Med. Studs. Examinations in Law.
16 SUNDAY	
17 Monday	Christmas Examinations begin.
18 Tuesday	Examinations in Law.
19 Wednesday	
20 Thursday	
21 Friday	Examinations in Law.
22 Saturday	Christmas Vacation begins. Meeting of Governors.
23 SUNDAY	
24 Monday	
25 Tuesday	Christmas-Day.
26 Wednesday	
27 Thursday	
28 Friday	
29 Saturday	
30 SUNDAY	
31 Monday	

JANUARY, 1889.

1 Tuesday	
2 Wednesday	
3 Thursday	
4 Friday	Christmas Vacation ends.
5 Saturday	
6 SUNDAY	
7 Monday	Lectures in Arts, Law, Med. & App. Sci. recommence,
8 Tuesday	Meeting of Fac. of App. Sci.
9 Wednesday	Meeting of Nor. Sc. Comm.
10 Thursday	
11 Friday	Meeting of Faculty of Arts.
12 Saturday	
13 SUNDAY	
14 Monday	
15 Tuesday	
16 Wednesday	
17 Thursday	
18 Friday	Meeting of Faculty of Arts.
19 Saturday	
20 SUNDAY	
21 Monday	Meeting of Museum Com.
22 Tuesday	Meeting of Library Com.
23 Wednesday	Regular Meet'g of Corporation.
24 Thursday	Examiners appointed. Annual Report to Visitor.
25 Friday	
26 Saturday	Meeting of Governors.
27 SUNDAY	
28 Monday	
29 Tuesday.	
30 Wednesday	
31 Thursday	Theses for M.A.&LL.D. to be sent in to the Dean of Faculty of Arts.

FEBRUARY, 1889.

1 Friday	Theses for Deg. of B.C.L. to be sent in to Dean of Fac. of Law
2 Saturday	Meeting of Examiners. Meet- of Faculty of Arts.
3 SUNDAY	
4 Monday	
5 Tuesday	Meeting of Fac. App. Science.
6 Wednesday	Meeting of Nor. Sch. Comm.
7 Thursday	
8 Friday	
9 Saturday	
10 SUNDAY	
11 Monday	
12 Tuesday	
13 Wednesday	
14 Thursday	
15 Friday	Meeting of Faculty of Arts.
16 Saturday	Supplemental Exam's in Arts and Applied Science.
17 SUNDAY	
18 Monday	
19 Tuesday	
20 Wednesday	
21 Thursday	
22 Friday	
23 Saturday	Meeting of Governors.
24 SUNDAY	
25 Monday	
26 Tuesday	Theses for Degree of B.C.L. to
27 Wednesday	be sent in to Dean of Faculty.
28 Thursday	

MARCH, 1889.

1 Friday	Theses for degree of B.C.L to be sent in to Dean of Faculty.
2 Saturday	Meeting of Faculty of Arts.
3 SUNDAY	
4 Monday	
5 Tuesday	Meeting of Fac. of Ap. Science.
6 Wednesday	No Lectures. Meeting of Nor. Sc. Com.
7 Thursday	
8 Friday	
9 Saturday	
10 SUNDAY	
11 Monday	
12 Tuesday	
13 Wednesday	
14 Thursday	
15 Friday	Meeting of Fac. of Arts.
16 Saturday	Examinations in Law, and Botany Med. Fac.
17 SUNDAY	
18 Monday	
19 Tuesday	Meeting Fac. App. Sci.
20 Wednesday	Lectures in Medicine end.
21 Thursday	Exam's in Med. begin.
22 Friday	Meeting of Fac. of Arts. Reports of Attendance on Lects.
23 Saturday	Meeting of Governors.
24 SUNDAY	
25 Monday	
26 Tuesday	
27 Wednesday	
28 Thursday	Lects. in Arts and Ap. Sc. end.
29 Friday	
30 Saturday	Convocation for Degrees in Med.
31 SUNDAY	

APRIL, 1889.

1 Monday	
2 Tuesday	Meeting of Fac. of Ap. Science
3 Wednesday	Meeting of Nor. Sc. Committee
4 Thursday	
5 Friday	
6 Saturday	
7 SUNDAY	
8 Monday	Sumr. Session Med. Fac. begins
9 Tuesday	
10 Wednesday	Meeting of Examiners.
11 Thursday	
12 Friday	Meeting of Fac. of Arts.
13 Saturday	
14 SUNDAY	
15 Monday	
16 Tuesday	
17 Wednesday	
18 Thursday	
19 Friday	Good Friday. Easter Vcn. begins
20 Saturday	
21 SUNDAY	Easter.
22 Monday	Meeting of Museum Committee
23 Tuesday	Meeting of Library Committee Easter vacation ends.
24 Wednesday	Regular meeting of Corporation.
25 Thursday	
26 Friday	Meeting of Examiners, & of Fac. Arts.
27 Saturday	Declaration of result of Exam's. Meeting of Governors.
28 SUNDAY	
29 Monday	Convocation for Degrees in Law and Applied Science.
30 Tuesday	Convocation for Degrees in Arts.

MAY, 1889.

1 Wednesday	Exams. in Nor. School begin.
2 Thursday	Meeting Nor. Sch. Committee.
3 Friday	
4 Saturday	
5 SUNDAY	
6 Monday	
7 Tuesday	
8 Wednesday	Meeting of Examiners for Sch. Examinations.
9 Thursday	
10 Friday	
11 Saturday	
12 SUNDAY	
13 Monday	
14 Tuesday	
15 Wenesday	
16 Thursday	
17 Friday	
18 Saturday	
19 SUNDAY	
20 Monday	
21 Tuesday	
22 Wednesday	
23 Thursday	
24 Friday	Queen's Birthday.
25 Saturday	Meeting of Governors.
26 SUNDAY	
27 Monday	
28 Tuesday	
29 Wednesday	
30 Thursday	
31 Friday	Normal Sch. closes for Summer Vacation.

JUNE, 1889.

1 Saturday	
2 SUNDAY	
3 Monday	Examinations for Certificate of Associate in Arts begin.
4 Tuesday	
5 Wednesday	Normal School Committee.
6 Thursday	
7 Friday	
8 Saturday	
9 SUNDAY	Whit-Sunday.
10 Monday	
11 Tuesday	
12 Wednesday	
13 Thursday	
14 Friday	
15 Saturday	Declaration of results of School Examinations.
16 SUNDAY	Trinity Sunday.
17 Monday	
18 Tuesday	
19 Wednesday	
20 Thursday	
21 Friday	
22 Saturday	Meeting of Governors.
23 SUNDAY	
24 Monday	Meetingof Museum Committee.
25 Tuesday	Meeting of Library Committee.
26 Wednesday	Regular Meeting of Corporat'n. Report of Normal School.
27 Thursday	
28 Friday	
29 Saturday	Summr. Sessn. Med. Fac. ends.
30 SUNDAY	

JULY, 1889.

1 Monday	
2 Tuesday	
3 Wednesday	
4 Thursday	
5 Friday	
6 Saturday	
7 SUNDAY	
8 Monday	
9 Tuesday	
10 Wednesday	
11 Thursday	
12 Friday	
13 Saturday	
14 SUNDAY	
15 Monday	
16 Tuesday	
17 Wednesday	
18 Thursday	
19 Friday	
20 Saturday	
21 SUNDAY	
22 Monday	
23 Tuesday	
24 Wednesday	
25 Thursday	
26 Friday	
27 Saturday	
28 SUNDAY	
29 Monday	
30 Tuesday	
31 Wednesday	

AUGUST, 1889.

1 Thursday	
2 Friday	
3 Saturday	
4 SUNDAY	
5 Monday	
6 Tuesday	
7 Wednesday	
8 Thursday	
9 Friday	
10 Saturday	
11 SUNDAY	
12 Monday	
13 Tuesday	
14 Wednesday	
15 Thursday	
16 Friday	Peter Redpath Museum opened 1882.
17 Saturday	
18 SUNDAY	
19 Monday	
20 Tuesday	
21 Wednesday	
22 Thursday	
23 Friday	
24 Saturday	
25 SUNDAY	
26 Monday	
27 Tuesday	
28 Wednesday	
29 Thursday	
30 Friday	
31 Saturday	

FACULTY OF ARTS.

EXHIBITION, SCHOLARSHIP, &c., EXAMINATIONS, SEPTEMBER, 1888.

DAY.	DATE	FIRST YEAR.	SECOND YEAR.	THIRD YEAR.	HOURS.
Monday.	17	Greek.	Greek.	Greek.	9 to 12
"	17	Latin.	Latin.	Latin Prose Comp.	2 to 5
"	17			Mathematics.	9 to 12
Tuesday.	18	Mathematics.	Mathematics.	Latin.	9 to 12
"	18			Mathematics.	9 to 12
"	18			Botany.	9 to 12
"	18	Mathematics.	Mathematics.	Ancient History.	2 to 5
"	18			Botany.	2 to 5
Wednesday.	19	English.	English.	English.	9 to 12
"	19			Logic.	9 to 12
"	19	English.		English.	2 to 5
"	19		Chemistry.	Chemistry.	2 to 5
Thursday.	20			Mathematics.	9 to 12
"	20			Botany.	9 to 12
"	20		French.	French.	9 to 12
"	20	Grammar and Comp. (Classics.)	General Paper. (Classics.)	English Composition	2 to 5
Friday.	21		Mathematics.	Mathematics.	9 to 12
			English.		2 to 5

CHRISTMAS EXAMINATIONS, DECEMBER, 1888.

DAY.	DATE	FIRST YEAR.	SECOND YEAR.	THIRD YEAR.	FOURTH YEAR.
Monday.	17	Latin.	Latin.	Mechanics.	Astronomy.
Tuesday.	18	Greek.	Botany.	Greek.	Greek.
"	18		German, P.M.	Botany, P.M.	Latin, P.M.
Wednesday.	19	Mathematics.	Psychology.	Latin	Moral Philosophy.
"	19	French, P.M.	French, P.M.	Zoology, P.M.	Geology.
Thursday.	20	Chemistry,	Greek.		History.
"	20	German, P.M.	German, P.M.		
"	20	Hebrew, P.M.			
Friday.	21	English.		Ment. Phil.	

FACULTY OF ARTS.

SESSIONAL AND HONOUR EXAMINATIONS, APRIL, 1889.

Day.	First Year.	Second Year.	Third Year.	Fourth Year.
April.	A.M. P.M.	A.M. P.M.	A.M. P.M.	A.M. P.M.
1 Mon.	Hebrew	Hebrew	Hebrew.	Hebrew.
2 Tue.	....	....	....	B.A. Honours.
3 Wed.	Greek.	Greek.	Mech'ics.	Ethics. Ethics.
4 Thurs.	Latin. Anc. History	Latin. Composition	Latin.	Latin. Latin.
5 Fri.	English.	English. English.	Ex. Phy- sics. English.	Ex. Phy- sics. History.
9 Tues.	Geometry ..... and Arithmetic. ...	Mathematics.....	Greek.....	Math. Physics and B.A. Honours.
10 Wed.	Trigonometry and Algebra.....	Mathematics...	Astr'y and..... Optics..... ..	B.A. Honours.
11 Thurs.	French. French.	French. French.	Metaphysics.....	Geology. Geology.
15 Mon.	Chemistry	.....	Zoology.	Greek. History.
16 Tues.	Meeting of Exa'ners.	Logic	.....	.....
17 Wed.	.....	Botany.....	French.	French; B.A. Hon- ours.
18 Thurs.	German.	German.....	German.	German; B.A. Hon- ours.
23 Tues.	Honour Examinations	Honour Examinations	Honour Exam'tions	B A. Honours.
24 Wed.	Meeting of	Examiners.	Meeting of	Corporation.
25 Thurs.	Honour Examinations	Honour Examinations	Honour Exam'tions	B.A. Honours.
26 Fri.	Meeting of	Examiners.		
27 Sat.	Meeting of	Examiners.	Declaration	of results.
30 Tues.	Convocation for Degr	ees in Arts.		

The Examinations begin at 9 A.M. and 2 P.M. when not specified otherwise.

FACULTY OF APPLIED SCIENCE.

EXAMINATIONS.—1888-89.

CHRISTMAS, 1888.

The days of the several Examinations will be announced by the Faculty during the Session.

SESSIONAL, 1889.

DAYS.	FIRST YEAR.	SECOND YEAR.	THIRD YEAR.	FOURTH YEAR.
Saturday March 31.	Freehand Drawing.	Descrpt've Geomet'y	Descrp've Geometry	
M. April 1			Theory of Structures	Theory of Structures.
T. " 2	Practical Chemistry.			Mineralogy (adv).
W. " 3		Mechanism.	Theory of Structures	Theory of Structures.
T. " 4		Essay.	Essay.	Essay.
F. " 5		Exp. Physics.	Exp. Physics.	Theory of Structures.
S. " 6		Theot. Chemistry.	Th.of Struc.(adv.) Theot. Chem.	Theory of Structures (adv.)
Sun. " 7	.....	.....	.....	.....
M. " 8		Practical Chem. Mechanical Work.	Pract. Chemistry. Mechanical Work.	Assaying. Theory of Structures
T. " 9	Mathematics.	Mathematics.	Mathematics.	Geology (adv.)
W. " 10		Prac. Construction.	Mining. Pract. Constr.	Theory of Structures (adv.)
T. " 11	French.	French.	Geology.	Geology adv.
F. " 12		Materials.	Materials.	Materials.
S. " 13	Mathematics.	Mathematics.	Mathematics.	
Sun. " 14	.....	.....	.....	.....
M. " 15	Chemistry.	Chemistry. Zoology (p.m.)	Chemistry. Mach.ct Millwork.	Chemistry. Mach'y ct Millwork
T. " 16		Surveying.	Surveying Machinery.	
W. " 17		Botany.	French.	Heat.
T. " 18	German.	German.	German.	Metallurgy.
F. " 19	Good Friday.	....	....	....
S. " 20	Mathematics.	Mathematics.	Mathematics.	Heat (adv.) Petrography.
Sun. " 21	.....	.....	.....	.....
M. " 22			Mineralogy.	Hydraulics.
T. " 23				
W. " 24			Mineralogy.	Machinery (adv.) Hydraulics (adv.) Geology (adv.)
T. " 25				
F. " 26				
S. " 27	Convocation.			

Faculty of Arts

THE PRINCIPAL (Ex-officio).

Professors :—MARKGRAF.
DAWSON.
JOHNSON.
CORNISH.
DAREY.
MURRAY.
HARRINGTON.

Professors :—MOYSE.
PENHALLOW.
COUSSIRAT.

Assistant Prof. :—EATON.

Lecturers :—CHANDLER.
LAFLEUR.

Dean of the Faculty :—ALEXANDER JOHNSON, LL.D.

Honorary Librarian :—REV. GEORGE CORNISH, LL.D.

[CONTENTS.—*Matriculation*, &c., § I.; *Exhibitions*, &c., § II.; *Course of Study*, § III.; *Examinations*, *Degrees*, &c., § IV.; *Exemptions*, &c., § V.; *Medals*, &c., § VI.; *Licensed Boarding Houses*, § VII.; *Attendance and Conduct*, § VIII.; *Library*, § IX.; *Peter Redpath Museum*, § X.; *Fees*, &c., § XI.; *Courses of Lectures*, § XII.]

The next Session of this Faculty will begin on September 17th, 1888, and will extend to April 30th, 1889.

§ I. MATRICULATION AND ADMISSION.

1. UNDERGRADUATES.—There are two Matriculation examinations in the year. (1) That held in the first week of June, on the same papers as those for the examinations for Associate in Arts. For this papers can be sent on application to any school in Canada, when the required conditions are fulfilled (for regulations see under school examinations *infra*). (2) That held at the opening of the session, on September 17th and following days, in McGill College alone.

As the examination is intended as a test of qualification for admission to the classes of the University, certificates of passing are not granted except to those who subsequently attend lectures.

a. JUNIOR MATRICULATION (FOR ENTRANCE INTO THE FIRST YEAR).

Examinations on June 1st in McGill College and local centres ; on September 17th in McGill College only.

In Classics.—Greek.—Xenophon, Anabasis, Book I. ; or Homer, Iliad, Book I. ; Greek Grammar.

Latin.—Cicero, Orations I. and II., against Catiline ; or, Virgil, Æneid, Book I. or Book II. ; Latin Grammar.

In Mathematics.—Arithmetic ; Algebra, to Simple Equations (inclusive) ; Euclid's Elements, Books I., II., III.

In English.—Writing from Dictation. A paper on English Grammar *including Analysis*. A paper on the leading events of English History. Essay on a subject to be given at the time of the examination.

An equivalent amount of other books or other authors in Latin and Greek than those named may be accepted by the Examiners on application made through the Professor of Classics.

(See also notice on p. 70.)

(Associates in Arts, who at their special Examination have passed in Latin, Greek, Algebra and Geometry, are not required to present themselves for the Matriculation Examination. See regulations under head of School Examinations).

An *Advanced Examination* in any one or more of the subjects of the First Year will be held in September for such of the candidates as desire it. Candidates who pass creditably in this will be entitled to such exemptions from the Lectures and from the Christmas Examinations of the First Year as the Faculty may determine. For the Advanced Examination in Classics two authors in Latin and two in Greek will be required, and the books fixed (see below) must be taken.

Candidates for the Advanced Examination must send notice to the Dean of their intention before the day of Examination, stating the subjects of the First Year and the extent of reading in each they purpose to submit.

Partial or Occasional Students (see below) in the first Year, who pass the April Sessional Examinations in one or more subjects, will, if Candidates for Undergraduate standing in the First Year in the following September, be allowed to count these as Advanced Examinations under the above rule.

The *Courses in some of the subjects for Advanced Matriculation* are as follows :—

Classics.—Greek.—Xenophon, Anabasis, Book I. ; Homer, Iliad, Book VI.

Latin.—Cicero, Orations I. and II. against Catiline ; Virgil, Æneid, Book II.

A paper on Greek and Latin Grammar, and Latin Prose Composition (Bradley's Arnold, to p. 155).

Mathematics.—Candidates who pass a satisfactory Examination in the Arithmetic and Euclid of the First Year (see course for entrance into Second Year) will be exempt from lectures up to Christmas and from the Christmas Examination.

Candidates who, in addition to the above, pass a satisfactory Examination in Algebra and Trigonometry, will be exempt from lectures altogether in these subjects in the First Year.

English.—Candidates who pass a satisfactory Examination on Morley's First Sketch of English Literature, Celtic period to Elizabethan period (inclusive), will be exempt from the lectures on Literature during the First Year.

---

b. SENIOR MATRICULATION (FOR ENTRANCE INTO THE SECOND YEAR).

(Examinations on Sept. 17th in McGill College only.)

In Classics.—*Greek*.—Homer, Iliad, Book VI.; Xenophon, Anabasis, Book I.; Grammar and Prose Composition.

Latin.—Virgil, Æneid, Book VI.; Cicero, Orations IV. against Catiline; Grammar and Prose Composition.

[An equivalent amount of other books or other authors in Latin and Greek than those named above may be accepted by the Examiners for entrance into the Second Year on application made through the Professor of Classics.]

In Mathematics:—

Euclid.—Books I., II., III., IV., VI., with defs. of Book V. (omitting Propositions 27, 28, 29, of Book VI.)

Algebra.—To end of Quadratic Equations. (Colensos's Alg.)

Trigonometry.—Galbraith and Haughton's Trigonometry, Chaps. 1, 2, 3, 4, 6, to beginning of numerical solution of plane triangles.

Arithmetic.—Elementary rules, Proportion, Interest, Discount, &c., Vulgar and Decimal Fractions, Square Root.

In English Literature.—Writing from Dictation, English Grammar, including Analysis, English Composition, English History (Buckley). Essay.

In French.—French Grammar; or (instead of French) *German*—in which knowledge sufficient to enable the Candidate to join the regular class will be required.

In Chemistry.—The Chemistry of the non-metallic Elements, and of the more common metals.

[*Note*.—Candidates unable to pass in French or German are not excluded, but they are required to begin German, and to continue the study of it for two years. Candidates unable to pass in Chemistry are required to attend such of the lectures in the subject as are open to them, and to pass an examination at the end of the Second Year].

2. STUDENTS OF OTHER UNIVERSITIES.—PARTIAL AND OCCASIONAL STUDENTS.

STUDENTS OF OTHER UNIVERSITIES.—May be admitted, on the production of Certificates, to a like standing in this University, after examination by the Faculty.

PARTIAL STUDENTS.—Candidates for Matriculation as Partial Students, taking three or more Courses of Lectures, will be examined in the subjects necessary thereto, as may from time to time be determined by the Faculty.

OCCASIONAL STUDENTS.—Persons desirous of taking one or two Courses of Lectures, as Occasional Students, may apply to the Dean for entry in his Register, and may procure from the Secretary tickets for the Lectures they desire to attend.

---

3. GENERAL REGULATIONS.

Every Student is expected to present, on his entrance, a written intimation from his parent or guardian of the name of the minister of religion under whose care and instruction it is desired that the Student should be placed, who will thereupon be invited to put himself in communication with the Faculty on the subject. Failing such intimation from his parent or guardian, the Faculty will endeavor to establish befitting relations.

Every matriculated student is required to sign in the Matriculation register the following :—

DECLARATION.

"I hereby declare that I will observe the statutes, rules and ordinances of "this University of McGill College to the best of my ability."

---

4. DIRECTIONS TO CANDIDATES FOR MATRICULATION.

1. *June Examinations* :—Schools desirous to take advantage of these may send their pupils for examination to McGill College ; or, if at a distance, by sending in names of Deputy Examiners for approval, with list of candidates on or before May 1st, may have papers sent to them.

2. *September Examinations* :—Held in McGill College only, Sept. 17th and following days. Candidates are required :—

(*a*). To present themselves to the Dean, and fill up a form of application for admission. (§I.)

(*b*) To pass the required examinations (§I.). (Unless passed in June, in which case a certificate of this is to be given to the Dean.)

(*c*) To procure tickets from the Registrar (§XI.), and, if not occasional Students, to sign the Matriculation Register.

(*d*) To present their tickets to the Dean. (§XI.)

(*e*) To provide themselves with the Academic dress. (§VIII.)

(*Note.*)—Candidates for entrance into the Faculties of Medicine or Applied Science in McGill University may pass in the above examinations.

§ II. SCHOLARSHIPS AND EXHIBITIONS.

General Regulations.

1. A Scholarship is tenable for *two* years. An Exhibition for *one* year.

2. Scholarships are open for competition to Students who have passed the University Intermediate Examination, provided that not more than three sessions have elapsed since their Matriculation; and also to candidates who have obtained what the Faculty may deem equivalent standing in some other University, provided that application be made before the end of the Session preceding the Examination.

3. Scholarships are divided into two classes:—[1] *Science* Scholarships; [2] *Classical and Modern Language* Scholarships. The subjects of Examination for each are as follows:—

Science Scholarships.—Differential and Integral Calculus; Analytic Geometry; Plane and Spherical Trigonometry; Higher Algebra and Theory of Equations; Botany; Chemistry; Logic. (For subdivision see below.)

Classical and Modern Language Scholarships.—Greek; Latin; English Composition; English Language, Literature, and History; French.

4. Exhibitions are assigned to the First and Second Years.

First Year Exhibitions are open for competition to candidates for entrance into the First Year.

Second Year Exhibitions are open for competition to Students who have passed the First Year Sessional Examinations, provided that not more than two Sessions have elapsed since their Matriculation; and also to candidates for entrance into the Second Year.

The subjects of Examination are as follows:—

First Year Exhibitions.—Classics, Mathematics, English.

Second Year Exhibitions.—Classics, Mathematics, English Language and Literature, Chemistry and French.

5. The First and Second Year Exhibition Examinations will, for Candidates who have not previously entered the University, be regarded as Matriculation Examinations.

6. No student can hold more than one Exhibition or Scholarship at the same time; but four of the First Year Exhibitioners will be granted exemption from the Sessional fees throughout their College Course, under Presentation Scholarships from the Governor General. (See below.)

7. Exhibitions and Scholarships will not necessarily be awarded to the best answerers at the Examinations. Absolute merit will be required.

8. If in any one College Year there be not a sufficient number of Candidates showing absolute merit, any one or more of the Exhibitions or Scholarships offered for competition may be transferred to more deserving Candidates in another year

9. A successful Candidate must, in order to retain his Scholarship or Exhibition, proceed regularly with his College Course to the satisfaction of the Faculty

10. The annual income of the Scholarships or Exhibitions will be paid in four instalments, viz.:—In October, December, February and April, about the 20th day of each month.

11. The Examinations will be held at the beginning of every session.

There are at present fifteen Scholarships and Exhibitions:—

THE JANE REDPATH EXHIBITION, founded by Mrs. Redpath, of Terrace Bank, Montreal:—value, $100 yearly, open to both men and women.

TEN MCDONALD SCHOLARSHIPS AND EXHIBITIONS, founded by W. C. McDonald, Esq., Montreal:—value, $125 each, yearly.

THE CHARLES ALEXANDER SCHOLARSHIP, founded by Charles Alexander, Esq., Montreal, for the encouragement of the study of Classics and other subjects:—value, $120 yearly.

THE GEORGE HAGUE EXHIBITION, given by George Hague, Esq., Montreal, for the encouragement of the study of Classics:—value, $125 yearly.

THE MAJOR H. MILLS SCHOLARSHIP, founded by bequest of the late Major Hiram Mills:—value, $100 yearly.

THE BARBARA SCOTT SCHOLARSHIP, founded by the late Miss Barbara Scott, for the encouragement of the study of the Classical languages and literature:—value, $100 to $120 yearly.

EXHIBITIONS AND SCHOLARSHIPS OFFERED FOR COMPETITION AT THE OPENING OF THE SESSION, SEPT., 1888.

To Students entering the First Year, three Exhibitions of $125, *and two of* $100.

Subjects of Examination:—

GREEK.—Homer, Iliad, bk. IV.; Xenophon, Anabasis, bk. I.; Demosthenes, Philippics I. and II.

LATIN.—Cicero, In Catilinam, Orat. I.; Virgil, Æneid, bk. I or bk. II.; Horace, Odes, Bk. I.

A paper on Greek and Latin Grammar.

Text-Books.—Hadley's or Goodwin's Elements of Greek Grammar. Arnold's Greek Prose Composition, Exercises 1 to 25. Dr. Wm. Smith's Smaller Latin Grammar, and Principia Latina, Part IV., or Arnold's Latin Prose Composition, by Bradley.

Mathematics.—Euclid, bks. I., II., III., IV.; Algebra to end of Harmonical Progression (Colenso); Arithmetic.

English.—English Grammar and Composition. (Mason's Grammar, omit Derivation and Appendix)

The First Year Exhibitions will be awarded to the best answerers in the above course, provided there be absolute merit.

But in subsequently distributing the Exhibitions of higher value among the successful candidates, answering in the following subjects will be taken into account also :—

1. A re-translation into Latin of an English version of some passage from one of the easier Latin Prose writers (for specimens see Smith's Principia Latina, Part V.).

2. Euclid, Book VI. (omitting Props. 27, 28, 29), with Defs. of Book V.

3. English :—An Examination upon one of Shakespeare's plays. For 1888,—Julius Cæsar. For 1889,—As You Like it.

To Students entering the Second Year, three Exhibitions of $125, *and two of* $100.

Subjects of Examination :—

Greek.—Homer, Odyssey, bk. VI.; Herodotus, bk. III., Chaps. 1 to 67; Demosthenes, Olynthiacs I. and II.

Latin.—Virgil, Georgics, bk. I.; Horace, Odes, bk. III.; Livy, bk. XXII.

Greek and Latin Prose Composition.

A paper on Grammar and History.

Text Books.—Dr. William Smith's History of Greece. Liddell's History of Rome. Hadley's Greek Grammar. Smith's Student's Latin Grammar. Arnold's Greek Prose Composition. Smith's Principia Latina, Parts IV. and V.

Mathematics.—The Mathematics (Ordinary and Honour) of First Year.

English Literature.—Mason's Grammar. Shakespeare, *As You Like it.* Trench, *Study of Words.*

Chemistry.—Nichol's Abridgement of Elliot and Storer's Manual as far as p. 208.

French.—Darey, Principes de Grammaire française; Lafontaine les Fables, livres I. and II.; Molière, le Bourgeois gentilhomme.

To Students entering the Third Year, Three Scholarships of $125, *and one of* $120, *tenable for two Years.*

One of these is offered in Mathematics and Logic, and one in Natural Science and Logic, as follows:—

1. *Mathematics.*—Differential Calculus (Williamson, Chaps. 1, 2, 3, 4, 7, 9; Chap. 12, Arts. 168-183 inclusive; Chap. 17, Arts. 225-242 inclusive). Integral Calculus (Williamson, Chaps. 1, 2, 3, 4, 5; Chap. 7, Arts. 126-140 inclusive; Chap. 8, Arts. 150-156 inclusive; Chap. 9, Arts. 168-176 inclusive). Analytic Geometry (Salmon's Conic Sections, subjects of Chaps. 1-13 (omitting Chap. 8), with part of Chap. 14. Hind's Plane and Spherical Trigonometry. Salmon's Modern Higher Algebra (first four chapters). Todhunter's or Burnside and Panton's Theory of Equations (selected course).

   Logic, as in Jevons' Elementary Lessons on Logic.

2. *Natural Science.*—*Botany*, as in Gray's Structural and Systematic Botany. *Canadian Botany*, including a practical acquaintance with all the orders of Phænogams Pteridophhytes and Bryophytes. *Chemistry*, Nichol's abridgment of Eliot and Storer's Manual of Chemistry.

   Logic, as in Jevons' Elementary Lessons on Logic.

Two will be given on an Examination in Classics and Modern Languages, as follows:—

Classics.—*Greek.*—Euripides, Medea; Demosthenes, the Olynthiacs; Xenophon, Hellenics, Book I.; Herodotus, Book VIII.; Thucydides, Book VI. *Latin.*—Horace, Satires, Book I., and Epistles, Book I.; Virgil, Georgics, Book I.; Terence, Adelphi; Tacitus, Annals, Book I.; Pliny, Select Letters (Pritchard and Bernard; Clarendon Press Series). Greek and Latin Prose Composition.

History.—*Text-books.*—Rawlinson's Manual of Ancient History; Smith's Student's Greece; Liddell's Rome.

English Language and Literature.—Spalding's English Literature (Chap. VI., Part III., to end of book); Shakespeare, Tempest; Milton's Paradise Lost, books I. and II.; Trench, Study of Words.

English Composition.—(High marks will be given for this subject.)

French.—Racine, Britannicus; Molière, les Femmes savantes. French Grammar. Les Ecrivains célèbres de la France:—Bonnefon. Translation from English into French.

Classical Subjects for Exhibitions, September, 1889.

FIRST YEAR.—*Greek.*—Homer, Iliad, Bk. IV.; Xenophon, Anabasis, Bk. I.; Demosthenes, Philippics I. and II.

Latin.—Virgil, Æn., Bk. I. or Bk. II.; Horace, Odes, Bk. III.; Cicero, In Catilinam, Orat. I.

SECOND YEAR.—*Greek.*—Homer, Odyssey, Bk. VI.; Demosthenes, Olynthiacs, I. and II.; Herodotus, Bk. III., chaps. 1-67.

Latin.—Virgil, Georgics, Bk. I.; Horace, Odes, Bk. I.; Livy, Bk. XXII.

EXEMPTIONS FROM FEES UNDER PRESENTATION SCHOLARSHIPS, &c.

A number of these are in the gift of Benefactors, and entitle the Students holding them to exemption from the Sessional Fees in the Faculty of Arts. Sixteen have been placed by the Governors at the disposal of His Excellency the Governor General. Candidates must pass the usual Matriculation Examination.

[By command of His Excellency, four of these Exemptions will be offered for competition in the First Year Exhibition Examinations of the ensuing session.]

Eight exemptions from fees may be granted by the Board of Governors, from ime to time, to the most successful students who may present themselves as candidates. By order of the Board one of these is given annually to the *Dux* of the High Schooi of Montreal, and one to the Dux of any other Academy or High School sending up, in one year, three or more candidates competent to pass reditably the Matriculation Examination.

In the event of any Academy or High School in the Province of Quebec offering for competition among its pupils an Annual Bursary in the Faculty of Arts, of not less than $80, the Governors will add the amount of the fees of tuition thereto.

Exemptions from fees, not exceeding three in number, may be given to holders of the Academy Diploma of the McGill Normal School, who, on fulfilling the required conditions, enter in the Second Year, if at the Diploma Examination they have taken 75 per cent. of the total marks, with not less than two-thirds of the marks in Latin and in Greek.

By a resolution of the Board of Governors exemptions are granted to students of any affiliated Theological College, recommended by its Principal, and entering the Faculty of Arts either as Undergraduates or as Partial Students.

One exemption is given annually to the pupil (boy or girl) from the Schools of the Protestant Commissioners, Montreal, who has taken the highest marks at the A.A. Examination, and is recommended by the Commissioners.

§ III. COURSE OF STUDY.

1. Undergraduates are arranged according to their standing, as Students of the First, Second, Third or Fourth Year. They are required to attend all the courses of Lectures and pass the examinations appointed for their several years, under the Regulations of the Faculty as to attendance and conduct; the only exceptions are those in favour of Honour and Professional Students, stated in § V.

ORDINARY COURSE FOR THE DEGREE OF B.A.

First Year.—Classics; French or German; English Grammar and Literature; Pure Mathematics; Elementary Chemistry.

Second Year.—Classics; French or German; English Literature; Elementary Psychology and Logic; Pure Mathematics; Botany.

Third Year.—Latin or Greek; Mathematical Physics (Mechanics and Hydrostatics); with any three subjects out of the two following divisions at the option of the student, provided two be selected from one division, and one from the other.

I. Literature, etc.—(*a*) Greek or Latin, according as Latin or Greek has been previously chosen. (*b*) French or German (whichever has been taken in the first two years). (*c*) English and Rhetoric. (*d*) Mental Philosophy.

II. Science.—(*e*) Optics and Descriptive Astronomy. (*f*) † Experimental Physics (First Course). (*g*) Natural Science (Zoology).

Fourth Year.—Latin or Greek (same language as in Third Year); Mathematical Physics (as in Third Year) or Astronomy and Optics; Moral Philosophy; with any three subjects out of the two following divisions at the option of the student, provided two be selected out of the one division, and one out of the other :—

I. Literature, etc.—(*a*) Greek or Latin, according as Latin or Greek has been taken above. (*b*) French or German, same language as in Third Year. (*c*) History.

II. Science.—(*d*) Astronomy and Optics, if not chosen as above. (*e*) † Experimental Physics (Second Course). (*f*) Natural Science (Geology).

† Students claiming exemptions (see § V) cannot take Experimental Physics if they have not taken the Third Year Mathematical Physics.

Instead of two distinct subjects in one of the above divisions, the Student in either Third or Fourth Year, may select one subject only, together with an *Additional Course* in the same or any other of his subjects in which such Additional Course may have been provided by the Faculty, under the above rules, provided he has been placed in the first class in the corresponding subject at the preceding Sessional Examination (viz. Intermediate or Third Year, according to standing).

The additional course is intended to be more than an equivalent in the amount of work involved, for any of the other subjects in the division.

(For details of additional courses provided see under Section XII.)

Undergraduates are required to study either French or German for two years (viz., in the First and Second Years), taking the same language in each year. Any Student failing to pass the Examination at the end of the Second Year will be required to pass a Supplemental Examination, or to take an additional Session in the Language in which he has failed. In addition to the obligatory, there are other lectures, attendance on which is optional.

Students who intend to join any Theological School, on giving written notice to this effect at the beginning of the First Year, may take Hebrew instead of French or German.

Undergraduates who have been previously Partial or Occasional Students, and have in that capacity attended a particular Course or Courses of Lectures, may at the discretion of the Faculty be exempted from further attendance on these Lectures, but no distinction shall in consequence be made between the Examinations of such Undergraduates and of those regularly attending Lectures.

2. At the Examination for the Degree of B.A., Honours are given in the following subjects, for which special Honour Courses are provided :—[For details see under § XII.]

1. *Classical Language and Literature.*
2. *Mathematics and Physics.*
3. *Mental and Moral Philosophy.*
4. *English Language, Literature and History.*
5. *Geology and other Natural Sciences.*
6. *Modern Languages with History.*
7. *Semitic Languages.*

Honours are given in the above subjects in the Third Year also, and in Mathematics in the First and Second Years.

Candidates for Honours are allowed exemptions under conditions stated in § V.

---

§ IV. EXAMINATIONS.

COLLEGE EXAMINATIONS.

For Students of McGill College only.

1 There are two Examinations in each year : one at Christmas and the other at the end of the Session. In each of these the students who pass are arranged according to their answering as 1st Class, 2nd Class, and 3rd Class.

In the Fourth Year only, the University Examination for B.A. takes the place of the Sessional Examination.

2. Students who fail in any subject at the Christmas Examinations are reguired to pass a Supplemental Examination (if permission be obtained from the Faculty) in that subject, before admission to the Sessional Examinations.

3. Undergraduates who fail in one subject at the Sessional Examinations of the first two years are required to pass a Supplemental Examination in it. Should they fail in this, they will be required in the following Session to attend the Lectures and pass the Examination in the subject in which they have failed, in addition to those of the Ordinary Course, or to pass the Examination alone without attending lectures, at the discretion of the Faculty.

4. Failure in two or more subjects at the Sessional Examinations of the first two years, or in one subject at the Third Year Sessional examinations, involves the loss of the Session. The Faculty may permit the Student to recover his standing by passing a Supplemental Examination at the beginning of the ensuing Session. For the purpose of this Regulation, Classics and Mathematics are each regarded as two subjects.

5. Application for a Supplemental Examination must in all cases be made to the Faculty. A Partial or Occasional Student is required to pay a fee of $1 for it, if granted. The time for the Supplemental Examination will be fixed by the Faculty; the Examination will not be granted at any other time, except by special permission of the Faculty, and on payment of a fee of $5.

UNIVERSITY EXAMINATIONS.

For Students of McGill College and of Colleges affiliated in Arts.

I. FOR THE DEGREE OF B.A.

There are three University Examinations:—The *Matriculation* at entrance; the *Intermediate*, at the end of the Second Year; and the *Final*, at the end of the Fourth Year.

1. The subjects of the Matriculation Examination are stated in Section I.

2. In the Intermediate Examination the subjects are Classics and Pure Mathematics, Logic, and the English Language, with one

other Modern Language, or Botany. Theological Students are allowed to take Hebrew instead of a Modern Language. The subjects for the examination of 1889 are as follows :

Classics.—Greek.—Euripides.—Medea.

Latin.—Horace.—Epistles, Book II. (including Ars Poetica).

Latin Prose Composition.

Mathematics.—Arithmetic.

Euclid, Books I., II., III., IV., VI. and defs. of Book V.

Algebra, to Quadratic Equations, inclusive.

Trigonometry, including use of Logarithms.

Logic.—Jevons' Elementary Lessons in Logic.

English.—Spalding's History of English Literature or Lectures (see course). A paper on the essentials of English History (Buckley). Essay on a subject to be given at the time of the Examination.

With one of the following :—

1. *Botany and Vegetable Physiology.*—Structural and Systematic Botany, as in Gray's Text-Book, omitting the Descriptions of the Orders.
2. *French.*—C. Delavigne :—Les Enfants d'Edouard. Racine :—Iphigénie. CONTANSEAU : Précis de la littérature française, from the beginning to the end of the XVII century. Translation into French :—Rasselas. Grammatical questions.
3. *German.*—Schmidt's German Guide ; Adler's Reader (selections from secs. 3 and 4) ; Translation into German.
4. *Hebrew.*—Genesis, chaps. III.-VI. ; Exodus, chap. XX. ; Deuteronomy, chap. XXXII. Exercises :—Hebrew into English, and English into Hebrew. Syntax.—Reading of the Masoretic Notes.

3. For the Final or B.A. Ordinary Examination the subjects are those appointed as obligatory in the Third and Fourth Years, viz., Latin or Greek ; Mathematical Physics (Mechanics and Hydrostatics) or Astronomy and Optics ; Moral Philosophy ; and those three subjects which the Candidate may have selected for himself in the Third and Fourth Years. (See § III.)

The subjects in detail for 1889 are as follows :—

Classics.

1. *Greek.*—Æschines, Contra Ctesiphontem. Æschylus, Prometheus Vinctus ; Greek History :—From the close of the Peloponnesian war to the death of Philip. (Or Latin, as follows) :—
2. *Latin.*—Tacitus, Annals, Book II ; Roman History (The twelve Cæsars). Juvenal, Satt. : VIII. and XIII.

Mathematical Physics.

1. Mechanics and Hydrostatics, as in Galbraith & Haughton's text-books; or
2. Optics and Astronomy, " "

Mental and Moral Philosophy.

Calderwood's Handbook of Moral Philosophy (omitting the Historical Sketch, pp. 43-76), and Rogers' Manual of Political Economy.

*Lectures, with any two of the books prescribed for Part I. of the Honour work of the Fourth Year.

Natural Science.

Mineralogy and Geology, as in Dana's Manual and Dawson's Lecture Notes.

*Geology of Canada and Palæontology, or Practical Chemistry, as in § XII.

Experimental Physics.

Electricity, Magnetism and Sound (see Courses of Lectures § XII).

History.

Myers:—Mediæval and Modern History; Bryce's Holy Roman Empire (omit Chaps. VI., VIII., IX., XIII., and Supplementary Chapter).

*Additional Course as in XII.

French.

The Course of French for the Fourth Year.

*The subjects of the Additional Course as in § IX.

German.

The Course of German for the Fourth Year.

* Additional Course as in § XII.

Hebrew (Theological Students only).

Job, Chaps. I., IV., XIV.; *Ecclesiastes*, Chaps. I., II., III., XII.; *Jeremiah*, Chap. I.—Gesenius' Grammar.—Exercises.—Hebrew into English, and English into Hebrew.—Syntax.—Reading of the Masoretic Notes.—

* Additional Courses (See § III).

For details of each subject, see Courses of Lectures, § XII.

At the B.A. Ordinary Examination, of those Candidates who obtain the required aggregate of marks, only those who pass in the First Class in three of the departments, and not less than Second Class in the remainder, shall be entitled to be placed in the First Class for the Ordinary Degree.

4. Every Candidate for the Degree of B.A. is required to make and sign the following

DECLARATION.

"Ego———— polliceor sancteque recipio me, pro meis viribus, studiosum fore communis hujus Universitatis boni, et operam daturum ut ejus decus et dignitatem promoveam."

II. FOR THE DEGREE OF M.A.

1. A candidate must be a Bachelor of Arts of at least three years standing.

Thesis.

2. *a.* He is required to prepare and submit to the Faculty a thesis on some literary or scientific subject.

b. The subject of the thesis must be submitted to the Faculty before the thesis is presented.

c. A paper read previously to any association or published in any way cannot be accepted as a thesis.

d. The thesis becomes the property of the University and cannot be published without the consent of the Faculty of Arts.

e. The thesis must be submitted before some date to be fixed annually by the Faculty, not less than two months before proceeding to the Degree.

The last day in the session of 1888–89 *for sending in Theses for M.A. will be Jan.* 30*th*, 1889.

Examination.

3. All candidates, except those who have taken First Rank B.A. Honours, (or Second Rank B.A. Honours in or after 1889), or have passed First Class in the Ordinary Examinations for the Degree of B.A., are required to pass an examination also, either in Literature or in Science, as each candidate may select.

(*a*) The subjects of the Examination in *Literature* are divided into two groups:—

A.—1. Latin. 2. Greek. 3. Hebrew.

B.—1. French. 2. German. 3. English.

(*b*) The subjects for the Examination in *Science* are divided into three groups:—

A.—1. Pure Mathematics (Advanced or Ordinary). 2. Mechanics (Including Hydrostatics). 3. Astronomy. 4. Optics.

B.—1. Geology and Mineralogy. 2. Botany. 3. Zoology. 4. Chemistry.

C.—1. Mental Philosophy. 2. Moral Philosophy. 3. Logic. 4. History of Philosophy.

(*c*) Every Candidate in Literature is required to select two subjects out of one group in the Literary section, and one out of the other group in the same section for the Examination. Every Candidate in Science is required to select two out of the three groups in the Scientific section ; and in one of the groups so chosen to select two subjects, and in the other group one subject for Examination.

(*d*) One of the subjects selected as above will be considered the principal subject, (being so denoted by the candidate at the time of application) and the other two as subordinate subjects.

For further details of the Examination application must be made to the Faculty before the above date. For fees see § XI.

III. FOR THE DEGREE OF LL.D.

Candidates must be Masters of Arts of at least twelve years standing. Every Candidate for the degree of LL.D. in Course is required to prepare and submit to the Faculty of Arts, not less than three months before proceeding to the degree, twenty-five printed copies of a Thesis on some Literary or Scientific *subject previously approved* by the Faculty, and possessing such a degree of Literary or Scientific merit, and evidencing such originality of thought or extent of research as shall, in the opinion of the Faculty, justify it in recommending him for that degree.

N.B. The subject should be submitted before the Thesis is written.

Every Candidate for the degree of LL.D. in Course is required to submit to the Faculty of Arts, with his Thesis, a list of books, treating of some one branch of Literature or of Science, satisfactory to the Faculty, in which he is prepared to submit to examination, and on which he shall be examined, unless otherwise ordered by vote of the Faculty. For Fees see § XI.

§ V. SPECIAL PROVISIONS FOR CANDIDATES FOR HONOURS AND FOR PROFESSIONAL STUDENTS.

The Honour lectures are open to Undergraduates only, and no Undergraduate is permitted to attend unless (*a*) He has been placed in the First Class in the subject at the preceding Sessional Examination, if there be one, and has (*b*) Satisfied the Professor that he is otherwise qualified.

(*c*) While attending lectures his progress must be satisfactory to the Professor. If not satisfactory, he may be notified by the Faculty to discontinue attendance.

I. Candidates for Honours in the Second Year.

Candidates for Honours in the Second Year who have obtained Honours in the First Year may omit the lectures and examinations either in Modern Languages (or Hebrew) or Botany, giving notice of the subject at the beginning of the session.

II. Candidates for Honours in the Third Year.

Every Candidate for Honours in the Third Year must, in order to obtain exemptions, have passed the Intermediate Examination, and must in the Examinations of the Second Year have taken First Rank Honours if Honours, be offered in the subject, or, if not, First Class at the Ordinary Sessional Examinations in the subject in which he proposes to compete for Honours, and be higher than Third Class in the majority of the remaining subjects; such Candidates shall be entitled in the Third Year to exemption from lectures and examinations in any one of the subjects required by the general rule (see § III.), except that in which he is a Candidate for Honours. A Candidate for Honours in the Third Year who has failed to obtain Honours shall be required to take the same examinations for B.A. as the ordinary undergraduates.

III. Candidates for B.A. Honours.

A Student who has taken Honours of the first rank in the Third Year, and desires to be a Candidate for B.A. Honours, shall be required to attend two only of the courses of lectures given in the ordinary departments, and to pass the two corresponding examinations only at the ordinary B.A. Examination. Candidates however, who at the B.A. Examinations obtain Third Rank Honours, will not be allowed credit for these exemptions at the end of the Session, unless the Examiners certify that the knowledge shown of the whole Honour Course (Part II. as well as Part I.), is sufficient to justify it. A Student who has taken Second Rank Honours in the Third Year, and desires to be a Candidate for B.A. Honours in the same subject, shall be allowed to continue in the Fourth Year the study of the same departments that he has taken in the Third Year, but shall be required to take the same number of subjects as in the Ordinary Course.

NOTE.—For subjects of Ordinary Course see § III.

IV. Professional Students.

Students of the Third and Fourth Years, matriculated in the Faculties of Law, Medicine or Applied Science of the University, or in any affiliated Theological College, are entitled to exemption from any one of the Ordinary subjects required in the Third and Fourth Years. (For rule concerning "Special Certificates" see § VI.)

To be allowed these privileges in either year they must give notice at the commencement of the Session to the Dean of the Faculty of their intention to claim exemptions as Professional Students, and must produce at the end of the Session certificates of attendance on a full course of Professional Lectures during the year for which the exemption is claimed.

V. Students of the University attending Affiliated Theological Colleges.

1. Such Students, whether entered as Matriculated or Occasional, are subject to the regulations of the Faculty of Arts in the same manner as other students.

2. The Faculty will make formal reports to the Governing body of the Theological College which any such Students may attend, as to :— (1) their conduct and attendance on the classes of the Faculty; and (2) their standing in the several examinations; such reports to be furnished after the Christmas and Sessional Examinations severally, if called for.

3. Matriculated Students are allowed no exemptions in the course for the degree of B.A. until they have passed the Intermediate Examination; but they may take Hebrew in the First and Second Years, instead of French and German.

4. In the Third and Fourth Years they are allowed exemptions, as stated above.

*Any Student who, under any of the above rules, desires to take Experimental Physics, is required to take Mechanics and Hydrostatics also, in the Third Year.

---

§ VI. MEDALS, HONOURS, PRIZES AND CLASSING.

1. GOLD MEDALS will be awarded in the B.A. Honour Examinations to Students who take the highest Honours of the First Rank in the subjects stated below, and who shall have passed creditably the Ordinary Examinations for the Degree of B.A., provided they have been recommended therefor to the Corporation by the Faculty on the report of the Examiners :—

The *Henry Chapman Gold Medal*, for the Classical Languages and Literature.
The *Prince of Wales Gold Medal*, for Mental and Moral Philosophy.

The *Anne Molson Gold Medal*, for Mathematics and Natural Philosophy.
The *Shakespeare Gold Medal*, for the English Language, Literature and History.
The *Logan Gold Medal*, for Geology and other Natural Sciences.
Major Hiram Mills Gold Medal, for a subject to be chosen by the Faculty from year to year.

If there be no Candidate for any Medal, or if none of the Candidates fulfils the required conditions, the Medal will be withheld, and the proceeds of its endowment for the year may be devoted to prizes in the subject for which the Medal was intended. For details, see announcements of the several subjects below.

2. HONOURS, of First, Second or Third Rank, will be awarded to those Undergraduates who have successfully passed the Examinations in any Honour Course established by the Faculty, and have also passed creditably the ordinary Examinations in all the subjects proper to their year.

In and after April, 1889, the Honour Examinations of the Third and Fourth Years will each be divided into two parts, separated by an interval of a few days, under the following regulations :—

a. No candidate will be admitted to Part II. unless he has shown a thorough and accurate knowledge of the course appointed for Part I.

b. The names of the successful candidates in Part I. will be announced before Part II. begins.

c. First or Second Rank Honours will be awarded to those candidates only who are successful in Part II.

d. Third Rank Honours will be awarded to those who are successful in Part I. only.

By an Order of the Lieutenant-Governor of Ontario in Council, Honours in this University confer the same privileges in Ontario as Honours in the Universities of that Province, as regards certificates of eligibility for the duties of Public School Inspectors, and as regards exemption from the non-professional Examination of Teachers for First-class Certificates for Grades "A. and B."

3. SPECIAL CERTIFICATES will be given to those candidates for B.A. who shall have been placed in the First Class at the ordinary B.A. Examination. The candidates must have obtained three-fourths of the maximum marks in the aggregate of the studies proper to their year, be in the First Class in not less than half the subjects, and have no Third Class. At this examination no candidate who has

taken exemptions (see § V.) can be placed in the First Class unless he has obtained First Class in each of the departments in which he has been examined.

4. CERTIFICATES of High General Standing will be granted to those Undergraduates of the first two years who have obtained three-fourths of the maximum marks in the aggregate of the Studies proper to their year, are in the First Class in not less than half the subjects, and have not more than one Third Class. In the Third Year the conditions are the same as for the Special Certificate for B.A.

5. PRIZES OR CERTIFICATES to those Undergraduates who may have distinguished themselves in the studies of a particular class and have attended all the other classes proper to their year.

6. A GOLD MEDAL is offered for the encouragement of the study of Modern Languages and Literature, with History, or for First Rank General Standing, as may be announced.

(*a*). The Regulations for the former are as follows :—

(1). The subjects for competition shall be French and German, together with the History part of the present Honour Course for the Shakespeare Medal.

(2). The course of study shall extend over two years, viz., the Third and Fourth years.

(3). The successful Candidate must be capable of speaking and writing both languages correctly.

(4). There shall be examinations in the subjects of the course in both the Third and Fourth Years, at which Honours may be awarded to deserving Candidates.

(5). The general conditions of competition, and the privileges as regards exemptions, shall be the same as for the other Gold Medals in the Faculty of Arts

(6). Students from other Faculties shall be allowed to compete, provided they pass the examination of the Third and Fourth Years in the above subjects.

(7). Candidates desiring to enter on the Third Year of the Course, who have not obtained First Class standing at the Intermediate or Sessional Examinations of the Second Year in Arts, are required to pass an examination in the work of the first two years of the course in Modern Languages, if called on to do so by the Professors.

(8). The subjects of Examination shall be those of the Honour Course in Modern Languages.

(*b*) The Regulations for the Gold Medal, if awarded for First Rank General Standing, are as follows :—

(1). The successful candidate must take no exemptions or substitutions of any kind, whether Professional or Honour, in the Ordinary B.A. Examinations.

(2). He shall be examined in the following subjects : —

(*a*) *Classics* (both languages) ; (*b*) *Mixed Mathematics ;—Mechanics, Hydrostatics, Optics, Astronomy ;* (*c*) *Mental and Moral Philosophy*, and any *two* of the following subjects, or any *one* of them with its Additional Course ; (*d*) Natural Science ; (*e*) Experimental Physics ; (*f*) English and History ; (*g*) French ; (*h*) German.

(3). His answering must satisfy special conditions laid down by the Faculty.

(4). The same candidate cannot obtain the Gold Medal for First Rank General Standing, and also a Gold Medal for First Rank Honours.

7. The Neil Stewart Prize of $20 is open to all Undergraduates of this, and also to Graduates of this or any other University, studying Theology in any College affiliated to this University, under the following rules :—

(1). The prize will not be given for less than a thorough examination in Hebrew Grammar passed in the First Class, in reading and translating the Pentateuch and such poetic portions of the Scripture as may be determined.

(2). In case competitors should fail to attain the above standard the prize will be withheld, and a prize of Forty Dollars will be offered in the following year for the same.

[Course for the present year :—Hebrew Grammar (Gesenius) ; Translation and analysis of the first ten chapters of Genesis ; the Prophet Habakkuk (the whole book) ; and the first five Psalms.]

(3). There will be two Examinations of three hours each : one in Grammar and the other in Translation and Analysis.

The Prize, founded by the late Rev. C. C. Stewart, M.A., and terminated by his death, was re-established by the liberality of the late Neil Stewart, Esq., of Vankleek Hill, and will be offered for competition next session.

8. Early English Text Society's Prize.—The prize, the annual gift of the Early English Text Society, will be awarded for proficiency in (1) Anglo-Saxon, (2) Early English before Chaucer.

The subjects of Examination will be :—

(1) The Lectures of the Third and Fourth Years on Anglo-Saxon.

(2 Specimens of Early English (Clarendon Press Series, ed. Morris and Skeat,) Part II., A.D., 1298—A.D., 1393. The Lay of Havelok the Dane (Early English Text Society, ed. Skeat).

9. NEW SHAKESPEARE SOCIETY'S PRIZE. This Prize, the annual gift of the New Shakspere Society, open to graduates and undergraduates will be awarded for a critical knowledge of the following plays of Shakspere :—

Hamlet; Macbeth; Othello; King Lear.

10. The names of those who have taken Honours, Certificates or Prizes will be published in order of merit; with mention, in the case of Students of the First and Second Years, of the schools in which their preliminary education has been received.

---

§ VII. LICENSED BOARDING HOUSES.

(*Regulations for Students in Arts passed by the Corporation, April, 1875.*)

1. All Students under 21 years of age, not residing with parents or guardians, nor belonging to a Theological College, shall reside in licensed boarding-houses, unless they produce written authority from parents or guardians to reside elsewhere.

2. Persons applying for a license to keep boarding-houses shall produce evidence satisfactory to the Principal as to their character and fitness, and the suitability of the house for the health and comfort of the Students. They shall also supply him with a statement of charges.

3. The keeper of the boarding-house shall report immediately to the Principal the entrance or departure of any Student, and any instance of immorality or disorderly conduct.

---

§ VIII. ATTENDANCE AND CONDUCT.

All Students shall be subject to the following regulations for attendance and conduct :—

1. A Class-book shall be kept by each Professor or Lecturer, in which the presence or absence of Students shall be carefully noted; and the said Class-book shall be submitted to the Faculty at all their ordinary meetings during the Session.

2. Each Professor shall call the roll immediately at the beginning of a lecture. Credit for attendance on any lecture may be refused on the grounds of lateness, inattention or neglect of study, or disorderly conduct in the class-room. In the case last mentioned the student may, at the discretion of the Professor, be required to leave the class-room. Persistence in any of the above offences against discipline, after admonition by the Professor, shall be reported to the Dean of Faculty. The Dean may, at his discretion, reprimand the student, or refer the matter to the Faculty at its next meeting, and may in the interval suspend from Classes.

3. Absence from any number of lectures can only be excused by necessity or duty, of which proof must be given, when called for, to the Faculty. The number of times of absence, from necessity or duty, that shall disqualify for the keeping of a Session, shall in each case be determined by the Faculty.

4. While in the College, or going to or from it, students are expected to conduct themselves in the same orderly manner as in the Class-rooms. Any Professor observing improper conduct in the College buildings or grounds may admonish the student, and, if necessary, report him to the Dean.

5. Every student is required to attend regularly the religious services of the denomination to which he belongs, and to maintain, without as well as within the walls of the College, a good moral character.

6. When students are brought before the Faculty under the above rules, the Faculty may reprimand, report to parents or guardians, impose fines, disqualify from competing for prizes or honours, suspend from Classes, or report to the Corporation for expulsion.

7. Any student who does not report his residence on or before November 1st in each year is liable to a fine of one dollar.

8. Any student injuring the furniture or buildings will be required to repair the same at his own expense, and will, in addition, be subject to such other penalty as the Faculty may see fit to inflict.

9. All cases of discipline involving the interest of more than one Faculty, or of the University in general, shall be immediately reported to the Principal, or, in his absence, to the Vice-Principal.

[NOTE.—All students are required to appear in Academic dress while in or about the College building. Students are requested to take notice that petitions to the Faculty on any subject cannot, in general, be taken into consideration, except at the regular meetings, appointed in the Calendar.]

§ IX. LIBRARY.

Extract from the Regulations.

1. The Books in the Library are classed in two divisions :—1st, Those which may be lent ; and, 2nd, those which may not, under any circumstances, be removed from the Library. The classification shall be determined by the Librarian.

2. Students in the Faculty of Arts or of Applied Science, who have paid the Library fee, may borrow books on depositing the sum of $5 with the Bursar, which deposit, after the deduction of any fines due, will be repaid at the end of the Session on the certificate of the Assistant Librarian that the books have been returned uninjured.

3. Students may borrow not more than three volumes at one time, except on the recommendation in writing of a Professor for specified books, and must return them within two weeks, on penalty of a fine of 5 cents a volume for each day of detention. An additional deposit of $4 entitles a student to borrow two extra volumes.

4. A student incurring fines beyond the sum-total of $1 shall be debarred the use of the Library until they have been paid.

5. Any volume, or volumes, lost or damaged by any person shall be replaced or paid for at such rates as the Library Committee may direct; and such rate of payment shall be determined by the value of the book itself, or of the set to which the volume belongs.

6 Graduates in any of the Faculties, on making a deposit of $5, are entitled to the use of the Library, subject to the same rules and conditions as students; but they are not required to pay the annual Library fee.

7. Graduates residing beyond the City limits, and applying for the loan of books from the Library, shall not receive such books without the sanction of the Honorary Librarian, and depositing the value of the books with the Bursar of the College.

8. Members of the McGill College Bock Club, on presenting annually a certificate of their membership, are by a special regulation of Corporation entitled to the use of the Library on the same conditions as Graduates, but they are not required to make a deposit.

9. Students in the Faculties of Law and Medicine, who have paid the Library fee to the Bursar, may read in the Library, and, on depositing the sum of $5 with the Bursar, may borrow books on the same conditions as students in Arts. They are required to present their Matriculation Tickets to the Bursar and to the Librarian or Assistant Librarian.

10. Persons not connected with the College may consult Books in the Library on obtaining an order from any of the Governors, or from the Principal, or the Dean of the Faculty of Arts or of Applied Science, or from any of the Professors in the said Faculties. Donors of books or money to the amount of Fifty dollars may at any time consult books on application to the Librarian.

11. The Library is kept open from 9 a.m. to 4 p.m. daily, and no person shall be allowed in the Library except during these hours.

12. No person, other than the Librarian and the assistants, is allowed to enter the alcoves, or to take down books from the shelves, except members of Corporation, and Professors, or those whom any of the above may accompany personally.

13. A person desiring to read or to borrow a book, which he has ascertained from the Catalogue to be in the Library, will fill up one of the blank forms provided for Readers and Borrowers respectively, and hand it to the Assistant Librarian who will thereupon procure him the book.

14. Readers must return the books they have obtained to the Assistant. Librarian before leaving the Library.

15. No conversation is permitted in the Library.

---

§ X. PETER REDPATH MUSEUM.

1. The Museum will be open every lawful day from 9 a.m. till 5 p.m., except when closed for any special reason by order of the Principal or Committee.

2. Students will obtain tickets of admission from the Principal on application.

3. Students will enter by the front door only, except when going to lectures.

4. Any Student wilfully defacing or injuring specimens, or removing the same, will be excluded from access to the Museum for the Session.

---

§ XI. FEES.

All fees and fines are payable to the Bursar of the College.

Matriculation Fee for the First Year (to be paid in the Year of Entrance only)	$4 00
For the Second Year (exigible from Students who enter in the Second Year, and also from those who have failed in the First Year and re-enter in the Second Year on Examination)	6 00
Sessional Fee	20 00
Library Fee	4 00
Gymnasium Fee	2 50

Undergraduates are required to pay all the above fees.

Partial Students, viz., those taking three or more Courses of Lectures, are required to pay the Matriculation, Library and Gymnasium Fees, and $5 for each Course which they attend, or $20 for all the courses.

Occasional Students taking one course of Lectures only are required to pay $5 per Session for that course.

Occasional Students taking two courses of Lectures are required to pay the Library Fee and $5 for each course.

N.B.—The lectures in one subject in any one of the four College Years constitute a "Course."

The Matriculation, Library, and Gymnasium Fees are exigible from Students holding exemptions from Sessional Fees.

Graduates in Arts are allowed to attend, without payment of fees, all lectures except those noted as requiring a special fee.

The fees must be paid to the Secretary and the tickets shown to the Vice-Dean within a fortnight after the commencement of attendance in each session. In case of default, the Student's name will be removed from the College books, and can be replaced thereon only by permission of the Faculty and on payment of a fine of $2.

[All fines are applied to the purchase of books for the Library.]

Fee for the Degree of B.A.	$ 5 00
" " " *M.A*	10 00*
" " " *LL.D*	50 00*

If the Degree of M.A. be granted, with permission to the Candidate, on special grounds, to be absent from Convocation, the fee is.....$25.00.

The B.A. fee must be paid before the Examination.

The M.A. or LL.D. fee must be sent to the Secretary of the University at the same time that the Candidate sends his Thesis to the Dean of the Faculty. This is a condition essential to the reception of his application.

* A Bachelor of Arts or Master of Arts, intending to proceed to a higher Degree, is required, *in addition* to the above, to keep his name on the books of the University, by the annual payment of a fee of $2 to the Registrar of the University (which payment suffices also for Registration under Chap. III. of the Statutes of the University). He may, if he prefer it, compound for the above annual fees, by the payment of $6 in one sum for the Master's Degree, or $30 for the Doctor's Degree, on or before the date of application for the Degree.

§ XII. COURSES OF LECTURES.

I. ORDINARY COURSE.

I. CLASSICAL LITERATURE AND HISTORY.

(MAJOR H. MILLS PROFESSORSHIP OF CLASSICS.)

Professor, REV. G. CORNISH, M.A., LL.D.

Asst. Prof., A. J. EATON, M.A., PH.D.

GREEK.

First Year.—HOMER.—ODYSSEY, Books XVII-XX. (Selections).

Second Year.—EURIPIDES.—MEDEA.

Third Year.—LYSIAS.—CONTRA ERATOSTHENEM.

ÆSCHYLUS.—PROMETHEUS VINCTUS.

Fourth Year.—ÆSCHINES.—CONTRA CTESIPHONTEM.

LATIN.

First Year.—CICERO.—SELECT LETTERS.

VIRGIL.—Book VI.

Latin Prose Composition.

Second Year.—HORACE.—EPISTLES, Book II.

TACITUS.—GERMANIA, Chaps. I.-XXVII.

Latin Prose Composition.

Third Year.—JUVENAL.—SATIRES VIII. and XIII.

LIVY.—Book XXI.

Latin Prose Composition.

Fourth Year.—TACITUS.—ANNALS, Book II.

Latin Prose Composition.

In the work of the Class the attention of the Student is directed to the collateral subjects of History, Antiquities and Geography; also to the grammatical structure and affinities of the Greek and Latin Languages; and to Prosody and Accentuation

An examination in Greek and Roman History will be required at the close of the First Year.

The Latin pronunciation adopted in the lectures, is based on the scheme issued by the Cambridge Philological Society (London: Trübner & Co).

In Greek, the system of pronunciation, outlined in the preface of Goodwin's Greek Grammar, is recommended to the attention of Students.

Text-Books.—First Year.—Goodwin's Greek Grammar, Arnold's Latin Prose by Bradley, Cox's General History of Greece, Merivale's General History of Rome.

2. ENGLISH LANGUAGE AND LITERATURE.

(MOLSON PROFESSORSHIP.)

Professor, CHAS. E. MOYSE, B.A.

Lecturer, PAUL T. LAFLEUR, M.A.

First Year.—English Language and Literature. Three lectures a week. Until Christmas the work of the class will partly consist of exercises in Analysis and Composition. One lecture a week will be given to the study of an English classic. Milton's Comus has been selected for the Session of 1888 9. After Christmas there will be a course of about thirty lectures on English Literature, indicating the leading features of its development throughout its history. The use of Prof. Henry Morley's Charts of English Literature is recommended. Students are also recommended to read the first chapter of Henry Morley's English writers (Cassell, 1887.).

Second Year.—A period of English Literature, and one play of Shakespeare.

One Lecture a week before Christmas; two Lectures a week after Christmas.

During the Session of 1888-9, English Literature from the Elizabethan period will form the subject of the Lectures. Shakespeare —Tempest. [Clarendon Press Edition.]

Third Year.—*A.* Chaucer's Prologue to Canterbury Tales.

Lecture once a week.

Text-book, Chaucer's Prologue, &c., ed. Morris.

B. Rhetoric, Lecture once a week,

Text-book, Bain's Rhethoric.

Fourth Year.—History.

3. MENTAL AND MORAL PHILOSOPHY.

(JOHN FROTHINGHAM PROFESSORSHIP OF MENTAL AND MORAL PHILOSOPHY.)

Professor, REV. J. CLARK MURRAY, LL.D.

Lecturer, PAUL T. LAFLEUR, M.A.

Second Year.—First Term.—Elementary Psychology. (Text-book:—Murray's Handbook of Psychology, Book I.) Second Term.—Logic (Text-book:—Jevons' Elementary Lessons in Logic).

Third Year.—First Term:—The Logic of Induction, as in Mill's System of Logic, Book III. Second Term:—The Psychology of Cognition, as in Murray's Handbook of Psychology, Book II., Part I.

Additional Course.—See Honour Course.

Fourth Year.—First Term.—The Psychological Basis of Ethics. Second Term.—Ethics Proper, comprising the elementary principles of Jurisprudence and Political Science.

For Additional Course see Honour Course.

In the Third and Fourth Years Students are also required to write occasional Essays on Philosophical Subjects.

---

4. FRENCH LANGUAGE AND LITERATURE.

Professor, P. J. DAREY, M.A., B.C.L., LL.D., Officier d'académie.

First Year.—DAREY, Principes de Grammaire française.
LAFONTAINE, Les Fables, livres I. et II.
MOLIÈRE, Le Bourgeois gentilhomme.
Dictation. Colloquial exercises.

Second Year.—DAREY, Principes de Grammaire française.
C. DELAVIGNE, Les Enfants d'Edouard.—RACINE, Iphigénie.
CONTANSEAU, Précis de littérature française, depuis son origine jusqu'à la fin du XVIIe siècle.
Translation into French :—DR. JOHNSON, Rasselas.
Dictation. Parsing. Colloquial exercises.

Third Year.—CORNEILLE, Le Cid.
Cogery :—Third French course.
Translation into French :—Dr. Johnson, Rasselas.
French Composition. Dictation.
CONTANSEAU, Précis de littérature française, depuis le XVIIe siècle jusqu'à nos jours.

Fourth Year.—Cogery.—Third French course.
BONNEFON, Les Ecrivains modernes de la France.
Translation into French :—MACAULAY, Warren Hastings.
French Composition. Dictation.
CORNEILLE, Le Cid.

For Additional Courses see Honour Lectures.

The Lectures in the Third and Fourth Years are given in French.

---

5. GERMAN LANGUAGE AND LITERATURE.

Professor, C. F. A. MARKGRAF, M.A.

First Year.—Schmidt's German Guide (1st Course). Adler's Progressive German Reader (selections from Sections 1 and 2). Translations, oral and written.

Second Year.—Schmidt's German Guide (2nd Course). Adler's Progressive German Reader (selections from Sections 3–5.) Townson, Easy German Stories. Translations, oral and written. Parsing.

Third Year.—Schmidt's German Guide (3rd Course.) Chamisso, Peter Schlemihl; Lessing, Minna von Barnhelm. History of German Literature from the earliest periods to the close of the 18th century (a brief survey by the Professor). Translation into German.

Fourth Year.—Whitney's German Grammar (excerpts); Fouqué, Undine; Schiller, Wallenstein.

Moschzisker's Guide to German Literature (Epoch VII., Sections II—VI.; 1750-1850).

Translation from English Prose writers. German Composition.

For additional courses see Honour Lectures.

---

6. HEBREW AND ORIENTAL LITERATURE.

Professor, REV. D. COUSSIRAT, B.A., B.D., Officier d'académie.

Elementary Course.—Reading and Grammar with oral and written exercises in Orthography and Etymology.—Translation and Grammatical Analysis of Genesis.—Text-books, Harper's Elements of Hebrew; and Introductory Hebrew Method and Manual.

Intermediate Course.—Grammar.—Dr. Harper's "Elements and Method."—Translation from Genesis, Exodus, Deuteronomy.—Exercises:—Hebrew into English, and English into Hebrew.—Syntax.—Reading of the Masoretic notes.

Advanced Course.—Gesenius' Grammar.—Exercises continued.—Translation. Reading of the Masoretic notes.

First Part:—Isaiah; Psalms.

Second Part: Job; Ecclesiastes; Jeremiah.

The course comprises Lectures on the above Languages and their Literature in particular, with a general notice of the other Oriental Languages, their genius and peculiarities. Comparative Philology, affinity of Roots, &c., also receive due attention, while the portions selected for translation will be illustrated and explained by reference to Oriental manners, customs, history, &c.

For Additional Courses see Honour Lectures.

---

7. MATHEMATICS AND NATURAL PHILOSOPHY.

(PETER REDPATH PROFESSORSHIP OF NATURAL PHILOSOPHY.)

Professor, ALEXANDER JOHNSON, M.A., LL.D.

In the ordinary work of the First Year assistance will be given by G. H. Chandler, M.A., Professor of Practical Mathematics in the Faculty of Applied Science.

MATHEMATICS.—(*First Year*)—Arithmetic—Euclid, Books 1, 2, 3, 4, 6, with Definitions of Book 5 (omitting propositions 27, 28, 29, of Book 6); Todhunter's Edition—Colenso's Algebra (Part I.) to end of Quadratic Equations.—Galbraith and Haughton's Plane Trigonometry to beginning of solution of Plane Triangles.

MATHEMATICS.—(*Second Year*)—Arithmetic, Euclid, Algebra, and Trigonometry as before.—Nature and use of Logarithms.—Remainder of Galbraith and Haughton's Plane Trigonometry.

The course for the Intermediate University Examination consists of the Mathematics for the first two years.

MATHEMATICAL PHYSICS.—(*Third Year*)—Galbraith and Haughton's Mechanics, viz., *Statics*, First 3 chapters, omitting sec. 5, chapter I., and sect. 21, chapter II.; *Dynamics*, subjects of the First 5 chapters. Galbraith and Haughton's Hydrostatics.

Additional Department.—Optics (Galbraith and Haughton). Descriptive Astronomy (Lockyer's Elementary Astronomy, English edition; First three chapters, viz., The Stars and Nebulæ; The Sun; The Solar System). Students are recommended to use with this an "Easy Guide to the Constellations," by Gall.

ASTRONOMY.—(*Optional*)—*Fourth Year.*—Galbraith and Haughton's Astronomy—The lectures on this subject will be given before Christmas.

EXPERIMENTAL PHYSICS.—(*Third and Fourth Years.*) 1.—*Light.*—Theories.—Reflection.—Refraction.—Dispersion.—Interference and Diffraction.—Double Refraction.—Polarization. 2.—*Heat.*—Dilatation of Solids, Liquids and Gases.—Specific and Latent Heat.—Radiation and Conduction.—Mechanical Theory of Heat. 3.—*Electricity*—Statical and Dynamical:—including Electro-Magnetism—Magneto-Electricity—Thermo-Electricity—Diamagnetism—Electric Measurements—Practical Application to Telegraphy, &c. 4.—*Magnetism.* 5.—*Sound.*—Theory of Undulations—Production and Propagation of Sound—Vibrations of Strings, Rods and Plates—Vibrations of Fluids—Musical Sounds. Text-book;—Ganot's Treatise, translated by Atkinson. This Course extends over two Years.

The Subjects for the Session 1888-89 are Electricity, Magnetism and Sound.

The Lectures in Mathematical and Experimental Physics will be illustrated by Apparatus, of which the College has a very good collection, including Dynamo and Gas Engine.

---

8. GEOLOGY AND NATURAL HISTORY.

(LOGAN PROFESSORSHIP OF GEOLOGY.)

Professor, Sir J. Wm. DAWSON, C.M.G., LL.D., F.R.S., F.G.S.

B. J. HARRINGTON, B.A., Ph.D., F.G.S., Professor of Mineralogy.

ZOOLOGY AND PALÆONTOLOGY. (*Third Year.*)—Elements of Animal Phy-

siology. Classification of Animals. Characters of the Classes and Orders of Animals, with Recent and Fossil Examples, taken as far as possible from Canadian Species. Demonstrations in the Museum.

Text-book.—Dawson's Hand-book of Zoology, with books of reference.

A prize of $25 will be given by the Professor for a collection of specimens of recent or fossil animals, accurately named. The Prize Collections or duplicates of them to remain in the Museum if required. Candidates must be Students of Zoology of the previous session, and the prize will not be awarded except for a collection of sufficient merit.

MINERALOGY AND GEOLOGY.—(*Fourth Year.*)

1. *Mineralogy and Lithology.* An elementary course, in which attention is given more particularly to such minerals and rocks as are important in Geology or useful in the Arts.

2. *Stratigraphy, Chronological Geology and Palæontology.* Data for determining the relative ages of Formations. Classification according to age. Fauna and Flora of the successive periods. Geology of British America. The lectures will be fully illustrated with specimens, and will be accompanied with demonstrations in the Museum and excursions for field work.

Text-books.—Dana's Manuals of Mineralogy and Geology; Dawson's Lecture Notes on Geology.

Students in Natural History are entitled to tickets of admission to the Museum of the Natural History Society of Montreal.

ADDITIONAL DEPARTMENT.—(*Third and Fourth Years.*)

See Honour Course § II., infra.

---

9. BOTANY.

Professor:—D. P. PENHALLOW, B.Sc.

Second Year.—General Morphology and Classification. Descriptive Botany. Flora of Canada. Nutrition and reproduction of plants. Elements of Histology.

Text-Books.—Gray and Bessey.

A book prize will be given by the Professor for the best collection of plants and the greatest proficiency in their determination. The collections will be returned after examination. Candidates must be Students of Botany of the previous Session.

ADDITIONAL COURSE.—(*Third Year.*)

Two lectures with practical work, each week.

Vegetable Histology.—Two lectures with practical work, each week. Microscopical manipulations ; Micro-Chemical reactions ; general histology of Phaenogams. Microscopical Drawing.

ADDITIONAL COURSE.—(*Fourth Year*).

Two lectures with practical work, each week.

Vegetable Histology.—Two lectures with practical work, each week. A continuation of the Course in the third year, embracing a study of the structure and life history of Cryptogams.

Special studies in embryology.

No student will be admitted to the Course in the Fourth Year, without having followed that for the Third Year.

Text-Books.—Bower and Vines' Practical Botany. Gœbel's Outlines of Classification and special Morphology.

Fee for Additional Course : $8 per session for use of instruments and reagents.

A prize will be awarded to the student showing the greatest proficiency in the work of the two years.

---

10. CHEMISTRY.

(DAVID J. GREENSHIELDS PROFESSORSHIP OF CHEMISTRY AND MINERALOGY).

Professor :—B. J. HARRINGTON, B.A., PH.D.

First Year.—A course of Lectures preparatory to the Course in Natural Science. The Lectures are illustrated by experiments, and treat of the Elementary Constitution of matter, the laws of Chemical Combination by weight and volume, the Atomic Theory, Quantivalence, Chemical Formulæ and Equations, Chemical Attraction, characteristics of Acids, Bases and Salts, Compound Radicals, the preparation and properties of the non-metallic and metallic Elements and many of their compounds, &c. A few Lectures are also devoted to the consideration of some of the more important Organic Substances, including Starch, Sugars, the Vegetable Acids and Alkaloids, Alcohol, &c. During the Course attention is called, as far as possible, to the relations of Chemistry to various manufacturing industries.

Students in Arts may attend the course in Practical Chemistry with the First Year in Applied Science on payment of a fee of five dollars.

Text-Book.—Nichol's Abridgment of Eliot and Storer's Manual of Chemistry

ADDITIONAL DEPARTMENT.—(*Third Year.*)

(*Theoretical or Organic Chemistry*).—One lecture a week. (*Practical Chemistry*).—Qualitative Analysis, as in Thorpe and Muir's Qualitative Chemical Analysis, two afternoons a week.

ADDITIONAL DEPARTMENT.—(*Fourth Year.*)

A course of Practical Chemistry, in continuation of that of the Third Year.

NOTE.—New chemical laboratories, capable of accommodating about fifty students, have recently been erected, and afford excellent facilities for practical work.

11. METEOROLOGY.

Superintendent of Observatory, C. H. MCLEOD, MaE.

Instructions in Meteorological Observations will be given in the Observatory, at hours to suit the convenience of the senior students.

Certificates will be granted to those students who pass a satisfactory examination on the construction and use of Meteorological Instruments and on the general facts of Meteorology.

12. ELOCUTION.

MR. JOHN ANDREW, Instructor.

Students are recommended by the Faculty to avail themselves of the Instructions of Mr. Andrew, who will make arrangements for evening classes to meet during the Session.

13. GYMNASTICS.

MR. FREDERICK S. BARNJUM, Instructor.

The classes will meet at the University gymnasium, at hours to be announced at the commencement of the Session. The Wicksteed gold, silver and bronze medals (the gift of Dr. R. J. Wicksteed) are offered for competition to students of the graduating class, and to students who have had instruction in the gymnasium for two sessions, the gold medal to the former, the silver and bronze medals to the latter. (See Regulations appended.)

II. HONOUR COURSES.

I. CLASSICS.

THIRD YEAR.

The Authors to be read in Class, and privately by the Candidate, together with the History and other subjects, are selected at the commencement of the Session, and are divided into *Part I.*, and *Part II.*, at the Honour Examination.

B.A. HONOURS.

Part I.—(1) *Greek Authors* :—Æschylus, Prometheus Vinctus ; Sophocles, Antigone ; Euripides, Medea ; Herodotus, Bk. IX. ; Xenophon, Hellenics, Bks. I. and II. ; Æschines, Contra Ctesiphontem. (2) *Latin Authors* :—Horace, Satires, Bk. I. ; Juvenal, Satires VIII. and XIII. ; Persius, Satires, V. and VI. ; Livy, Bk. XXI. ; Tacitus, Annals, Bk. II. ; Cicero, De Officiis. (3) *Greek and Latin Prose Composition* :—As in Arnold's Greek Prose and Smith's Principia Latina, Part V.

Part II.

I. GREEK.

Plato.—Republic, Books I. and II.
Aristotle.—The Poetics.
Herodotus.—Book VIII.
Thucydides.—Books VI. and VII.
Hesiod.—Works and Days.
Æschylus.—Seven against Thebes.
Aristophanes.—The Frogs.
Pindar.—Olympic Odes.
Theocritus.—Idylls I. and VI.
Demosthenes.—De Corona.

II. LATIN.

Livy.—Books XXII. and XXIII.
Tacitus.—Annals, Book I.
" Histories, Book I.
Virgil.—Æneid, Books I. to IV.
Plautus.—Aulularia.
Terence.—Adelphi.
Juvenal.—Sat. X.
Cicero.—De Imperio Cn. Pompeii.

III. HISTORY OF GREECE AND ROME.

Text-books :—

1. Grote's History of Greece.
2. Arnold's History of Rome.
3. Mommsen's History of Rome.
4. Mahaffy's History of Greek Literature.
5. Cruttwell's History of Roman Literature.
6. Cruttwell and Banton's Specimens in Roman Literature.
7. Donaldson's Theatre of the Greeks.

IV. COMPOSITION.

1. Composition in Greek and Latin Prose.

2. General paper on Grammar, History and Antiquities.

The Examination for B.A. Honours will extend over ——days, in the morning from 9 to 12, and the afternoon 2 to 5.

---

2. MENTAL AND MORAL PHILOSOPHY.

THIRD YEAR.

Part I.—Schwegler's History of Philosophy, Chapters 1-21 inclusive; Mill's System of Logic, Books IV. and V.; Murray's Handbook of Psychology, Book II., Parts 2 and 3; Thomson's Outlines of the Laws of Thought.

Any two of these subjects, along with the Honour Lectures, may be taken as the Additional Course.

Part II.—Cicero's De Finibus, Books I. and II.; Fraser's Selections from Berkeley.

FOURTH YEAR.

Part I.—Schwegler's History of Philosophy, Chapters 22-45 inclusive; Lorimer's Institutes of Law; Murray's Outline of Hamilton's Philosophy; Spencer's First Principles; Mill's System of Logic, Book V.

Any two of these subjects, along with the Honour Lectures, may be taken as the Additional Course.

Part II.—Aristotle's Nicomachean Ethics; Zeller's Stoics, Epicureans and Sceptics; Spinoza's Ethics; Watson's Philosophy of Kant in Extracts; Maine's Ancient Law.

N.B.—The class essays of candidates for Honours are expected to display superior ability in the dicussion of philosophical subjects.

---

3. ENGLISH LANGUAGE, LITERATURE AND HISTORY.

THIRD YEAR.

Part I.—Early English; Morris and Skeat, Part II., Extt. I.-IX., inclusive.

Spenser.—Faerie Queene, Bk. I.

Milton—Comus.

Burke—Reflections on the French Revolution.

Hallam—Middle Ages, chaps. 1, 3, 5.

(The above mentioned portion of the Honour work constitutes the Additional Course of the Third Year.)

Sweet's Anglo-Saxon Reader ; Extt. IV., VIII. and XXI.
Dryden—Annus Mirabilis ; Absolom and Achitophel, Part I.; the Preface to the "Fables."
Macaulay—Essays on Clive, Ranke's History of the Popes, and Warren Hastings.

Part II.—Sweet's Anglo-Saxon Reader; the pieces in verse.
Chaucer—Assembly of Foules, (ed. Lounsbury.)
Sidney—An Apologie for Poetry, (ed. Arber, to be obtained by post from the editor, 1 Montague Road, Edgbaston, Birmingham, price 6d.)
Milton—Shorter English Poems ; Areopagitica, (ed. Hales).
Addison—Essays on Paradise Lost and on the Imagination, (Spectator).
Wordsworth—Prelude, (Moxon's edition).
Leslie Stephen—English Thought in the Eighteenth Century, vol. II., chap. X., sections V.-X. inclusive.
Macaulay, vol. I., chap. I.
History of the English People—(Reign of Eliz. and Chas. II.).

FOURTH YEAR.

Part I.—Sweet's Anglo-Saxon Reader, Extt. II., XIII., XX.
Pope—Essay on Criticism ; Essay on Man.
Shelley—Adonais.
Tennyson—In Memoriam.
Buckle—History of Civ. in England, 4 chaps.
(The above-mentioned portion of the Honour work constitutes the Additional Course of the Fourth Year.)
Early English; Morris and Skeat, Part II., Extt. X.-XX. inclusive.
Shakspere—Love's Labour's Lost, A Midsummer Night's Dream, Hamlet.
Matthew Arnold—Essays in Criticism (the second).

Part II.—Portions of Beowulf, (ed. Harrison and Sharp).
Sweet's Second Anglo-Saxon Reader ; Vespasian Hymns.
Sir Thomas More—Utopia (ed. Arber).
Villiers—Rehearsal (ed. Arber).
Campbell—Pleasures of Hope.
Tennyson—Coming of Arthur, Gareth and Lynette, Holy Grail, Passing of Arthur.
Gibbon—Decline and Fall, chaps. L., LI., LXIV., LXV.
Guizot—History of Civilization in Europe.
Macaulay—Vol. I., chap. 3.
Freeman—Growth of the English Constitution.

4. MATHEMATICS AND PHYSICS.

MATHEMATICS.—(*First Year.*)—McDowell's Exercises on Modern Geometry, &c.—Hall and Knight's advanced Algebra—Todhunter's or Burnside and Ponton's Theory of Equations (selected course).

The Honour lectures in the First Year begin after Christmas. Candidates will be examined on the first half of McDowell's Exercises before admission to them.

MATHEMATICS.—(*Second Year*).—Hind's Plane and Spherical Trigonometry or Lock's Higher Trigonometry and McClelland and Preston's Spherical Trigonometry, Part I.—Salmon's Conic Sections, chapters 1, 2, 3, 5, 6, 7, and 10 to 13, inclusive—Williamson's Differential and Integral Calculus (selected course).

MATHEMATICAL PHYSICS.—(*Third Year.*)

Part I.—1. Minchin's Statics, vol. I., selected chapters.
2. Williamson and Tarleton's Dynamics, chaps. 1 to 8, inclusive.

Part II.—Remainder of Minchin's Statics. Vol. I.
Besant's Hydromechanics Part I, Chaps. 1, 2, 3, 7.
Godfray's Astronomy.
Parkinson's Optics.

B.A. HONOUR COURSE.

Part I.—MATHEMATICAL PHYSICS.—Honour Course of the Third Year (the whole).
PURE MATHEMATICS.—Williamson's Differential and Integral Calculus.
Salmon's Geometry of Three Dimensions (selected course).

Part II.—PURE MATHEMATICS.—Boole's Differential Equations (selected course).
MECHANICS.—Minchin's Statics, vol. II, except chapters 14 and 18.—Williamson & Tarleton's Dynamics (the whole, including the Dynamics both of Rigid Bodies and of a Particle).—Routh's Dynamics of a Rigid Body (for reference).—Besant's Hydromechanics.
PHYSICAL ASTRONOMY.—Godfray's Lunar Theory, or Cheyne's Planetary Theory.
Newton's Principia, Lib. I., Sects. 1, 2, 3, 9, and 11.
LIGHT.—Lloyd's Wave Theory of Light.
ELECTRICITY AND MAGNETISM.—Ordinary Course, with Cumming's Theory of Electricity and Maxwell's Elementary Electricity.
HEAT, ACOUSTICS, } As in ordinary course.

Engineering students may be candidates for Honours.

5. NATURAL HISTORY AND GEOLOGY.

THIRD YEAR.

Part I.

(1) *Mineralogy.*—Crystallography. Physical properties of minerals dependent upon light, electricity, state of aggregation, etc. Chemical composition. Principles of classification. Description of species important as constituents of Rocks.

Part II.

(2) *Blowpipe Analysis and Determinative Mineralogy.*

(3) *Lithology.*—Classes of Rocks, Texture and Composition. Description of the more commonly occurring Rocks.

4) Directions for collection and study in the vacation.

B.A. HONOUR COURSE.

Part I.

(1) *Mineralogy and Lithology.*—Description of mineral species, particular attention being called to the Economic Minerals of Canada. Calculations of mineralogical Formulæ, Quantivalent Ratios, etc.

(2) *Practical Geology.*—Including methods of observing and recording geological facts and searching for mineral deposits. *Palæontology*, including studies of special groups of fossils. One lecture or demonstration weekly. Dana's Manual. (Geikie's Field Geology, Nicholson's Palæontology, special Reports and Memoirs.)

Part II.

(3) *Lithology.*—Essential and accessory constituents of Rocks. Macroscopic and microscopic characters. Preparation of Rock-sections. Microscopic examination of Minerals and Rocks. Principles of classification. Description and determination of Rocks. (One lecture weekly, with occasional demonstrations in the Museum or Laboratory.)

(4) *Canadian Geology.*—Studies of the several Geological formations of Canada with their distribution, subdivisions and characteristic fossils. One lecture weekly with excursions and Museum demonstrations. Reports of Geological Survey, Dawson's Acadian Geology.

Candidates for Honours will be expected to attain to such proficiency as to be able to undertake original investigations in some at least of the subjects of study.

Students in the Faculty of Applied Science may be Candidates for Honours.

ADDITIONAL DEPARTMENT.

Third Year.—Mineralogy as in Part I above.

Fourth Year.—The Practical Geology, as in Part I. above, with Museum studies in Palæontology.

6. MODERN LANGUAGES.

(French and German, both of which must be taken.)

THIRD YEAR.

Part I.—FRENCH.—LA FONTAINE, Les Fables.
RACINE, Les Plaideurs.
PAUL ALBERT, Littérature du XVIIe siècle.
Translation into French :—GOLDSMITH, The Vicar of Wakefield.
CORNEILLE, Horace.

GERMAN.—Koerne., Leyer und Schwert ; Freytag, Aus dem Staat Friedrichs des Grossen ; Schiller, Wilhelm Tell. Translation from English Prose writers.

(Either of the above may be taken as the Additional Course in the language to which it belongs. See § III.).

The Ordinary Courses in French and German must also be taken. See § III.

Part II.—FRENCH.—Racine :—Phèdre ; Les Plaideurs. Boileau :—L'Art Poétique. Pascal :—Les Pensées. La Bruyère :—Les Caractères. Ampère :—Formation de la Langue française.

GERMAN.—Wieland.—Oberon. Schleicher.—Die Deutsche Sprache (History of the German Language).

History of German Literature from 1750, being a critical review of the principal writers of the classical period. The men of 'Sturm und Drang.' The Romantic Schools. Modern Lyric Poets. (Gostwick and Harrison's Outlines).

FOURTH YEAR.

Part I.—FRENCH.

AUG. BRACHET, Grammaire historique.
PAUL ALBERT, La Littérature française, des origines à la fin du XVIe siècle.
EMILE SOUVESTRE, Un Philosophe sous les toits.
Translation into French :—As You Like it.

GERMAN.—Whitney's German Grammar (cont.)
Goethe, Iphigenie auf Tauris.
Lessing, Nathan der Weise.
Schiller, Geschichte des dreissigjährigen Krieges.

(Either of the above may be taken as the Additional Course in the language to which it belongs.)

The Ordinary Courses in French and German must also be taken.

Part II.—FRENCH.

Molière :—Le Misanthrope.
Victor Hugo :—Hernani.
La Rochefoucauld :—Les Maximes.
Dr. C. Saucerotte :—L'esprit de Montaigne.
Auguste Brachet :—Grammaire historique.
Etudes des anciens textes français (Demogeot).

GERMAN.

A special study of Goethe's 'Faust' (Part I.)
Selections from Heine's Lyrical Poems.
Schleicher.—Die Deutsche Sprache.

German Literature from 1150 to 1350 :—Mediæval classic writers—Epic, Lyric and Didactic Poetry— (Kurz, Leitfaden zur Geschichte der deutschen Literatur).

For First and Second Rank Honours the successful candidates must be capable of speaking and writing both languages correctly.

---

7. SEMITIC LANGUAGES.

THIRD YEAR.

Part I.—*Hebrew.*—Genesis (the whole Book).
Isaiah, chaps. 40-66.
Chaldee.—Daniel.
Syriac.— The Peshito : St. John, chaps. 1-5.
Literature.—Driver's "Uses of the Tenses in Hebrew."

Part II.—*Hebrew.*—Ecclesiastes (the whole Book).
Psalms, Books 1 and 2 (1-72).
Chaldee.—Targum of Onkelos, Genesis, chaps. 1-10.
Syriac.—The Peshito : Romans, chaps. 1-5.
Literature.—Davidson's "The Hebrew Text of the Old Testament."

FOURTH YEAR.

Part I.—*Hebrew.*—Proverbs, chaps. 20-31.
Job, chaps. 27-42.
Chaldee.—Ezra.
Syriac.—The Peshito ; St. John, chaps. 6-15.
Literature.—Muller's "Outlines of Hebrew Syntax."

Part II.—Hebrew.—Deuteronomy (the whole Book.)
Malachia (id.).
Chaldee.—Selections from the Targums of Jonathan Ben Uzziel, etc.
Syriac.—Bar Hebræus: Selections from his Chronicles.
Literature.—Renan's "A general History of the Semitic Languages."

Additional Department:—(*For Third and Fourth Years.*)

The Chaldee Language:—Brown's Aramaic Method and Translation.

The Chaldee portions of Scripture. Targums of Onkelos and Jonathan Ben Uzziel.

The Syriac Language:—Grammar, Translation from the Peshito.

Notice to Candidates for Entrance.

FRENCH.

Candidates are expected to have some elementary knowledge of this subject. If not qualified to attend the lectures they are required, either to prepare for the examination with the aid of private tuition, or else to study German.

LECTURES IN THE UNDERGRADUATE COURSE IN THE FACULTY OF ARTS.

SESSION OF 1888–89.

	Hours.	Monday.	Tuesday.	Wednesday.	Thursday.	Friday.
FIRST YEAR.	9	Classics.	† Mathematics. (*b*)	Mathematics.	† Mathematics. (*b*)	Mathematics.
	10	Mathematics.	Classics.	Classics.	Classics.	Classics.
	11	English.	* French.	* French.	* French.	English.
	12	Elementary Chemistry.	* German. * Hebrew.	English.	* German. * Hebrew.	Elementary Chemistry.
SECOND YEAR.	9	* French.	Logic.	* French.	* Hebrew.	* French.
	10	Classics.	* German. Hebrew.	Logic.	Logic.	* German. † Mathematics.
	11	Mathematics.	Classics.	† Mathematics. Botany.	Classics.	Classics.
	12	† Mathematics. Botany.	* German. (*c*)	English.	* German (*c*)	
THIRD YEAR.	9	English Literature.	Classics.	† Classics. † Math. Phy.	Classics.	†Classics. † English. † Geol.
	10	German. † Math. Physics	French. † Ment. Phil.	† Anglo-Saxon.	French. Theoretical.	† Mathematical Physics.
	11	† Mental Philosophy.	Zoology.	Physics (Mathematical).	Chemistry.	* Syriac, etc.
	12	Mental Philosophy.	⁂ Physics (Experimental).	Mental Philosophy.	Zoology.	Rhetoric.
	1		Hebrew.	Classics.	⁂ Physics (Experimental).	Physics (Mathematical).
					Hebrew.	German.
FOURTH YEAR.	9	† Math. Physics. † English	Astronomy. (*a*)	† Classics. Geology.	Astronomy. (*a*)	† Classics.
	10	Geology.	French. † Ment. Phil.	English Literature.	† Mental Philos phy.	Geology.
	11	Classics. † Geology.	German.	Classics.	German. History.	French. † Geology. Anglo-Saxon and Early English.
	12	Moral Phil.	Moral Philosophy.	† Geology. † Math. Phy.	Moral Philosophy.	German. † Math. Physics.
	1		Chaldee		Chaldee	
			⁂ Physics (Experimental).		⁂ Physics (Experimental).	
					* Hebrew.	

(*a*) During First Term. (*b*) Second Term. (*c*) For beginners entering 2nd Year. † For Candidates for Honours.
* The Student may take at his option French or German in the first two years, or, if a Theological Student, Hebrew. ⁂ From Nov. 1st.
Classes at 1 p.m. may be changed to other hours.
Library open every day, 9 to 4. The Museum will be opened as arranged by the Professor of Natural History.
Determinative Mineralogy, Wednesday, at 2 p.m. Practical Chemistry, Monday and Thursday, at 2 p.m.

Special Course for Women

IN THE FACULTY OF ARTS.

Donalda Endowment.

The classes for women under this endowment are wholly separate, except those for Candidates for Honours (including most of the additional courses in the Third and Fourth Years). The examinations are identical with those for men. Women will have the same privileges with reference to Classing, Honours, Prizes and Medals as men.

Regulations for Examinations, Exemptions, Boarding Houses, Attendance, Conduct, Library and Museum are the same as for men. Undergraduates only wear the Academic Dress.

The *Jane Redpath Exhibition* is open for competition, at entrance into the First Year, to both men and women.

The income of the *Hannah Willard Lyman Memorial Fund* will be given in prizes.

I. MATRICULATION AND ADMISSION.

In Classics.—Latin.—Cicero, Orations I. and II. against Catiline; or, Virgil Æneid, Book I. or Book II.; Latin Grammar.

Greek.—Xenophon, Anabasis, Book I.; or, Homer, Iliad, Book I.; Greek Grammar.

Candidates who cannot pass in Greek may substitute an additional modern language in the course.

In Mathematics.—Arithmetic; Algebra, to Simple Equations (inclusive); Euclid Elements, Books I., II., III.

In English.—Writing from Dictation. A paper on English Grammar, *including Analysis*. A paper on the leading events of English History. Essay on a subject to be given at the time of the Examinations.

An equivalent amount of other books or other authors in Latin and Greek than those named may be accepted by the Examiners on application made through the Professor of Classics.

PARTIAL STUDENTS.—Candidates unable to pass in all the above subjects may be admitted as Partial Students, in the separate classes; if prepared to enter in three of the subjects of the ordinary course of study they may in the First Year make good their standing as Undergraduates at the Christmas or Sessional Examinations.

OCCASIONAL STUDENTS.—Ladies desirous of taking one or two Courses of Lectures in the separate classes for women, as Occasional Students, may procure from the Secretary of the University tickets for the Lectures they desire to attend.

II. ORDINARY COURSE OF STUDY FOR THE DEGREE OF B.A.

(*In separate classes.*)

First Year.—Classics; French or German; English Grammar and Literature; Pure Mathematics; Elementary Chemistry.

Second Year.—Classics; French or German; English Literature; Elementary Psychology and Logic; Pure Mathematics; Botany.

Third Year.—Latin or Greek; Mathematical Physics (Mechanics and Hydrostatics); with any three subjects out of the two following divisions at the option of the student, provided two be selected from one division, and one from the other.

I. Literature, etc.—(*a*) Greek or Latin, according as Latin or Greek has been previously chosen. (*b*) French or German (whichever has been taken in the first two years). (*c*) English and Rhetoric. (*d*) Mental Philosophy.

II. Science.—(*e*) Optics and Descriptive Astronomy. (*f*) † Experimental Physics (First Course). (*g*) Natural Science (Zoology).

Fourth Year.—Latin or Greek (same language as in Third Year); Mathematical Physics (as in Third Year) or Astronomy and Optics; Moral Philosophy; with any three subjects out of the two following divisions at the option of the student, provided two be selected out of the one division, and one out of the other:—

I. Literature, etc.—(*a*) Greek or Latin, according as Latin or Greek has been taken above. (*b*) French or German, same language as in Third Year. (*c*) History.

II. Science.—(*d*) Astronomy and Optics, if not chosen as above. (*e*) †Experimental Physics (Second Course). (*f*) Natural Science (Geology).

†Undergraduates claiming exemptions (see § V.) cannot take Experimental Physics if they have not taken the Third Year Mathematical Physics.

Instead of two distinct subjects in one of the above divisions, the Student in either Third or Fourth Year, may select one subject only, together with an additional course in the same or any other of hes subjects under the above rules (if arrangements be made by the Faculty for it), provided she has been placed in the first class in the corresponding subject at the preceding Sessional Examination (viz. Intermediate or Third Year, according to standing).

The additional course is intended to be more than an equivalent, in the amount of work involved, for any of the other subjects in the division.

Additional courses are provided at present in Botany and Practical Chemistry.

Honour Course and Additional Courses.

(In mixed classes.)

Undergraduates desirous to take one of the Honour Courses in Classics, Mathematical Physics, Mental and Moral Philosophy, English Language and Literature, History, Geology and other Natural Sciences, Modern Languages or such portions of the Honour Courses as constitute the "Additional Courses," may in the Third and Fourth Years obtain exemptions to the same extent as those given to men, but must take the same lectures with men.

Details will be found in Section XII. of the Calendar.

III. DEGREES.

Students are admissible to the degrees of B.A., M.A., and LL.D. conferred in the usual way on the usual conditions, and will be entitled to all the privileges of these degrees, except that of being elected as Fellows.

IV. FEES.

Matriculation Fee for the First Year (to be paid in the Year of Entrance only)	$4 00
Sessional Fee	20 00
Library Fee (optional)	4 00

Partial Students, viz., those taking three or more Courses of Lectures, are required to pay the Matriculation Fee, and $5 for each Course which they attend, or $20 for all the Courses.

The above Fees are to be paid to the Registrar of the University, from whom, Tickets for the Library and copies of the Library Rules may be obtained.

Occasional Students—$5 for each class.

[Associates in Arts, who, at their special Examination, have passed in Latin Algebra and Geometry, are not required to present themselves for the Matriculation Examination.]

Exemptions from fees may be allowed to the highest pupil of the Girl's High School of Montreal, and of other Schools, on the same terms as men.

One exemption from tuition fees is annually allowed to the pupil (boy or girl) from the Schools of the Protestant commissioners, Montreal, who has taken the highest marks at the A. A. Examinations, and is recommended by the Commissioners.

V. LODGINGS.

Women not resident in Montreal, proposing to attend the classes, and desiring to have information as to suitable lodgings, are requested to intimate their wishes in this respect to the Registrar of the University at least two weeks before the opening of the session.

It is expected that arrangements may be made with some of the Ladies' Schools in the city to receive students desiring accommodation as borders.

N.B.—*The Students will have the aid and oversight of a competent Lady Superintendent.*

LECTURES OPEN TO OCCASIONAL STUDENTS, SESSION 1888-9.

CHEMISTRY :—

Dr. Harrington.

Tuesday and Thursday at 12.

BOTANY :

Prof. Penhallow.

Monday at 3, Wednesday at 12.

ZOOLOGY :—

Sir Wm. Dawson.

Tuesday and Thursday, at 12 noon.

GEOLOGY :—

Sir W. Dawson and Dr. Harrington.

Tuesday and Thursday, at 2 p m.

Wednesday, at 10 a.m.

EXPERIMENTAL PHYSICS :—

Dr. Johnson.

Tuesday and Tursday, at 3 p.m.

PSYCHOLOGY AND LOGIC :—

Rev. Dr. Murray and Mr. Lafleur.

Tuesday, Thursday and Friday, at 4 p.m.

MENTAL PHILOSOPHY :—

Rev. Dr. Murray and Mr. Lafleur.

Monday and Wednesday, at 4 p.m.

MORAL PHILOSOPHY :—

Rev. Dr. Murray.

Tuesday, Wednesday, and Thursday at 12.

RHETORIC :—

Mr. Lafleur.

Wednesday, at 11 a.m.

ENGLISH :—

Prof. Moyse and Mr. Lafleur.

Language and Literature,
Tuesday, Wednesday and Friday, at 4 p.m.
Literature of Elizabethan and Stuart periods and Shakespeare,
Wednesday and Friday, at 3 p.m. (only one lecture a week before Christmas).
Chaucer—Monday, at 10 a.m.

HISTORY :—

Prof. Moyse.

Thursday, at 9 a.m.

LATIN AND GREEK* :—

Rev. Dr. Cornish and Dr. Eaton.

FRENCH* :—

Dr. Darey.

GERMAN* :—

Prof. Markgraf.

MATHEMATICS AND MATHEMATICAL PHYSICS* :—

Dr. Johnson and Prof. Chandler.

Those Courses, in which two lectures weekly are delivered, will each amount to about 40 lectures, and the others in proportion.

---

* The Lectures on these subjects extend over all the Years of the Course, and the hours will depend on the standing of Students with respect to previous preparation.

FACULTY OF ARTS.

*Ordinary Lectures in the Donalda Special Course for Women.

Years	Hours.	Monday.	Tuesda .	Wednesday.	Thursday	Friday.
First Year.	12		Chemistry.		Chemistry.	
	2	Mathematics.	French.	Mathematics.	French.	Mathematics.
	3	Latin.	German.	Latin.	Latin.	German.
	4	Greek.	English.	English.	Greek.	English.
Second Year.	10	Mathematics.				
	11	Greek.				
	12			Botany.		
	2	Latin.		Latin.	German.	
	3	Botany.	French.	English.	French.	English.
	4	German.	Logic.	Greek.	Logic.	Logic.
Third Year.	10	English.	Classics.		Classics.	French.
	11	French.		Rhetoric.	German.	
	12	Classics.	Zoology.	Math. Physics.	Zoology.	Math. Physics
	3	German.	Exp. Physics	English.	Exp. Physics.	
	4	Metaphysics.		Metaphysics.		
Fourth Year.	9				History.	
	10	French.	Astronomy.	Geology.	Astronomy.	French.
	11	German.	Classics.		Classics.	
	12		Moral Phil.	Moral Phil.	Moral. Phil.	
	2		Geology.		Geology.	German.
	3		Exp. Physics.		Exp. Physics.	

The hours for Practical Chemistry and Additional Botany will be arranged at the beginning of the Session.

* For Honour Lectures see previous table.

McGILL UNIVERSITY LIBRARY

Faculty of Applied Science.

THE PRINCIPAL *(ex-officio)*.

Professors:—HARRINGTON, BOVEY, McLEOD, CHANDLER,

Assistant:—EVANS.

Associate Professors:—DAWSON, MARKGRAF, JOHNSON, DAREY, MOYSE, PENHALLOW,

Associate Lecturer:—LAFLEUR.

Dean of the Faculty:—HENRY T. BOVEY, M.INST. C.E.

The Instruction in this Faculty is designed to afford a complete preliminary training, of a technical as well as theoretical nature, to such Students as are preparing to enter any of the various branches of the professions of Engineering and Surveying, or are destined to be engaged in Assaying, Practical Chemistry, and the higher forms of Manufacturing Art.

Four distinct Departments of study are established, viz.:

(1).—Civil Engineering and Surveying, (2).—Mechanical Engineering, (3).—Mining Engineering, (4).—Practical Chemistry.

Each of these extends over four, or, under certain conditions three years, and is specially adapted to the prospective pursuits of the Student.

The Degrees conferred by the University upon such undergraduates of this Faculty, as shall fulfill the conditions and pass the Examinations hereinafter stated, will be in the first instance, "Bachelor of Applied Science," mention being made in the Diploma of the particular Department of study pursued; and, subsequently, the degrees of "Master of Engineering" or of "Master of Applied Science." (§ V.)

Examinations for Land Surveyors:—Any graduate in the Faculty of Applied Science, in the Department of Civil Engineering and Land Surveying, may have his term of apprenticeship shortened to one year for the profession of Land Surveyor in

Quebec or Ontario, or for the profession of Dominion Land Surveyor. He must, however, pass the preliminary and final examinations before one of the Boards of Examiners. The former examination should be passed before entering the University, or in the First or Second Year of attendance.

Students in the Civil Engineering Department, who at the beginning of their Fourth Year give notice to the Faculty of their intention to prepare for the examination for Dominion Topographical Surveyors, will receive preparation for that Examination, more especially in Spherical and Practical Astronomy and Geodesy, and may be exempted from the Heat and Hydraulics, or from the designing of the Fourth Year.

Partial Students may be admitted to the lectures and examinations in the above special work.

§ I. MATRICULATION AND ADMISSION.

1. Candidates for Matriculation* must present themselves for examination on the 17th of September, 1888. They may, however, be admitted at a later period of the Session upon special application, if qualified to take their places in the classes in progress.

JUNIOR MATRICULATION. For entrance into the First Year, the subjects for examination will be :—

Mathematics.—Arithmetic; Algebra, to end of Simple Equations; Euclid's Elements, Books, I., II., III.

English.—Grammar [including Analysis] and Composition.

Associates in Arts who, in the School Examinations of the University, have passed in Geometry and Algebra, will be received as matriculated Students in the First Year.

SENIOR MATRICULATION. For entrance into the Second Year, the subjects for examination will be :—

Arithmetic.

Algebra.—To the end of Quadratics [as in Colenso's Algebra, Part 1].

Euclid.—Books I., II., III., IV., VI. and XI., and the definitions of Book V.

Plane Trigonometry.—Including solution of Triangles, and the use of Mathematical Tables.

Chemistry.—As in Nichol's Abridgment of Eliot and Storer's Manual.

* See also page 16.

English.—Grammar (including Analysis), Composition and the leading facts of the History of England.

French or German.—French Grammar and easy translation. German as in Schmidt's German Guide, Part I., and easy translation.

Candidates unable to pass in Chemistry, may be allowed by the Faculty to enter and take the First Year lectures on Chemistry.

Candidates who produce certificates of having already completed a portion of a course in some recognized School of Applied Science may be admitted to an equivalent standing.

---

§ II. MEDALS, EXHIBITIONS AND PRIZES.

1. The BRITISH ASSOCIATION GOLD MEDAL AND EXHIBITION, founded by the British Association for the Advancement of Science, in commemoration of the meeting held in Montreal in the year 1884.

The British Association Gold Medal for Session 1888–89 will be open for competition to Fourth Year Students of the Civil Engineering Course. Candidates must take a first-class general standing in the Ordinary Course, and the medal will be awarded to the Student who stands first in the Advanced Course. (§IV. B.)

A British Association Exhibition (being the balance of the medal fund) will be open for competition in September, 1888, to Students entering the Fourth Year, the subjects of examination being the Theory of Structures, Mathematics and Mathematical Physics of the Ordinary Course.

2. The SCOTT EXHIBITION of $66, founded by the Caledonian Society of Montreal, in commemoration of the Centenary of Sir Walter Scott.

Two Exhibitions on this endowment will be offered for competition at the opening of Session 1888–89, namely :—

One to Students entering the Third Year, the subjects of Examination being :—

[*a*] Macaulay's History of England, Vol. I., cap. I; Sir Walter Scott's Lady of the Lake. [*b*] Mathematics. [*c*] Mechanism.

One to Students entering the Second Year, the subjects of Examination being :—

[*a*] Macaulay's History of England, Vol. I.; cap. I.; Shakespeare's Tempest; [*b*] Mathematics.

3. Two Prizes in Books, each of the value of $25, presented by E. B. Greenshields, B.A., and S. Greenshields, B.A., for the two best Summer Reports or Essays.

4. A prize to Students entering the Third Year, for proficiency in levelling (running a line of levels and closing on the starting point).

5. A Prize of $25.00 is offered by J. H. Burland, B.A.Sc., to Students entering the Second Year, the subjects of examination being: (*a.*) Inorganic Chemistry; (*b.*) Elements of Organic Chemistry; (*c.*) Practical Chemistry.

6. Prizes or certificates of merit are given to such Students as take the highest places in the Sessional and Degree Examinations.

§ III. SPECIAL PROVISIONS.

1. Partial Students may be admitted to the professional classes upon payment of special fees (§ VII).

2. Undergraduates in Arts may, if allowed by the Faculty of Arts, be admitted to the Professional Classes in Practical Science on payment of the fees for these classes.

3. Students in Applied Science may, by permission of the Faculty, take the Honour Classes in the Faculty of Arts

4. Students who have passed the Intermediate in Arts, with standing not lower than the Second Class in Mathematics, have the privilege of entering the Second Year in Applied Science, and will be exempted from one of the Departments in the Third and Fourth Years in Arts.

5. Undergraduates in Arts of the Second or Third Years, or Graduates of any University, entering the Faculty of Applied Science may, at the discretion of the Professors, be exempted from such lectures in that Faculty as they may have previously attended as Students in Arts, but must pass all the examinations.

6. Students who fail to obtain their Session, and who, in consequence, repeat the Year, will not be exempted from examination in any of those subjects in which they may have previously passed, except by the express permission of the Faculty. Application for such exemption must be made at the commencement of the Session.

§ IV. COURSES OF STUDY FOR SESSION 1888-89.

A. ORDINARY COURSES.

Civil Engineering.	Mechanical Engineering.	Mining Engineering.	Practical Chemistry.
FIRST YEAR.			
Arithmetic, Euclid.	Arithmetic, Euclid.	Arithmetic, Euclid.	Arithmetic, Euclid.
Algebra. Trigonometry.	Algebra. Trigonometry.	Algebra. Trigonometry.	Algebra. Trigonometry.
Geometrical Conics.	Geometrical Conics.	Geometrical Conics.	Geometrical Conics.
Solid Geometry.	Solid Geometry.	Solid Geometry.	Solid Geometry.
Descriptive Geometry (By permission of the Faculty.)	Descriptive Geometry. (By permission of the Faculty.)	Descriptive Geometry. (By permission of the Faculty.)	Descriptive Geometry. (By permission of the Faculty.)
Freehand Drawing.	Freehand Drawing.	Freehand Drawing.	Freehand Drawing.
Chemistry.	Chemistry.	Chemistry.	Chemistry.
English.	English.	English.	English.
French or German.	French or German.	French or German.	French or German.
SECOND YEAR.			
Mechanism.	Mechanism.	Practical Chemistry.	Practical Chemistry.
Materials.	Materials	Mechanism.	
Surveying.	Surveying.	Surveying.	
Descriptive Geometry.	Descriptive Geometry.	Descriptive Geometry.	Descriptive Geometry.
Algebra.	Algebra.	Algebra.	
Analytical Geometry.	Analytical Geometry.	Analytical Geometry.	
Calculus.	Calculus.	Calculus.	
Mathematical Physics.	Mathematical Physics.	Mathematical Physics.	Mathematical Physics.
Experimental Physics.	Experimental Physics. Loco. Design & Cons,	Experimental Physics.	Experimental Physics.
Zoology.	Mechanical Work.	Zoology.	Botany.
English.	English.	English.	English.
French or German.	French or German.	French or German.	French or German.
THIRD YEAR.			
Theory of Structures.	Theory of Structures.	Theory of Structures.	Practical Chemistry.
Materials.	Materials.	Materials.	Theoretical Chemistry.
Surveying.	Machinery & Millwork	Mining.	
	Loco. Design & Cons.		Blowpipe Analysis.
Descriptive Geometry.	Descriptive Geometry.	Practical Chemistry.	Mineralogy.
Analytical Geometry.	Analytical Geometry.	Blowpipe Analysis.	
Calculus	Calculus.	Descriptive Geometry.	
Sphl. Trigonometry.		Analytical Geometry.	
Practical Astronomy.		Calculus.	
Mathematical Physics.	Mathematical Physics	Mathematical Phys'cs.	Mathematical Physics.
Experimental Physics.	Experimental Physics.	Experimental Physics.	Experimental Physics.
Geology & Mineralogy.	Mechanical Work.	Geology & Mineralogy	Zoology.
Modern Languages.†	Modern Languages.†	Modern Languages.†	Modern Languages.†
FOURTH YEAR.			
Theory of Structures.	Theory of Structures.	Assaying.	Practical Chemistry.
Mathematics.	Mathematics.	Mathematics.	Theoretical Chemistry.
	Machinery & Millwork	Metallurgy.	Metallurgy.
	Metallurgy of Iron.	Geology (advanced).	Assaying.
	Loco. Design & Cons	Mineralogy advanced.	Mineralogy.
Heat & Heat-Engines.	Heat & Heat-Engines.	Heat & Heat-Engines.	Geology.
Hydraulics.	Hydraulics.	Hydraulics.	
Materials.	Materials.	Materials.	
Designs.	Designs.	Designs.	
Estimates. Spec'ns.	Estimates. Spec'ns.	Estimates. Spec'ns.	
Modern Languages.*	Modern Languages.*	Modern Languages.*	Modern Languages.*

(1) During the summer recess the Students in the 2nd, 3rd and 4th years are to employ themselves in some practical work (Mechanical Engineering students in a work-shop), and they are also to prepare a report on such work, to be handed in not later than October 1st. Credit will be given for this Report (or Essay) in the subsequent Sessional Examination.

(2) Students are not allowed to take subjects which do not form part of their course, without the sanction of the Faculty.

† English or French or German. * Modern languages not imperative in the Fourth Year.

B. ADVANCED COURSES.

1. CIVIL ENGINEERING.—The higher Mathematics and Mathematical Physics, and the higher branches of Applied Mechanics (*Stiffness and Strength of Materials*, *Theory of Structures*, *Heat and Heat Engines*, *Hydraulics*). Students who have passed a creditable Examination in the Mathematical subjects of the Second Year may enter the Advanced Course of the Third Year, and may be exempted from the Modern Languages of that Year.

2. MECHANICAL ENGINEERING.—The higher Mathematics and Mathematical Physics, and the higher branches of Applied Mechanics (*Stiffness and Strength of Materials*, *Dynamics of Machines*, *Heat and Heat Engines*).

3. MINING ENGINEERING.—Study of Ore-Deposits (as in Phillips). Metallurgy. Theory and Practice of Metal-Mining and Ore-Dressing. Special work in mineral analysis, with an Essay thereon.

4. CHEMISTRY.—Organic Chemistry, Industrial Chemistry, Mineralogy and special laboratory work, with an Essay.

---

§ V. EXAMINATIONS.

1. FOR THE DEGREE OF BACHELOR OF APPLIED SCIENCE.

1. CHRISTMAS AND SESSIONAL EXAMINATIONS.

There will be a Christmas Examination for Students of the First Year in all the subjects, and for Students of the Second, Third and Fourth Years in Mathematics, and in those subjects which they take in the Faculty of Arts. A Sessional Examination in all the subjects will be held at the end of the First and Second Years.

2. DEGREE EXAMINATIONS.

(*a*) There will be a Primary Examination at the end of the Third Year in all the subjects of that year. Candidates must pass this Examination before entering the Final Year.

(*b*) There will be a Final Examination for the degree of Bachelor of Applied Science at the end of the Fourth Year in all the subjects of that year.

The General Classification for the Degree Examination will be under two heads, viz.:—

First, those who have satisfied the Examiners in the Advanced Courses, in order of merit.

Secondly, those who have satisfied the Examiners in the Ordinary Courses in order of merit.

Special Certificates may be given for proficiency in particular subjects.

Certificates may be given to Students who have passed the Special Courses added to the curriculum.

Students who take their Degree in one of the Courses provided by the Faculty of Applied Science may obtain credit in either of the remaining Courses, by attending one or more subsequent Sessions, the necessary provision for which will be made.

II. FOR THE DEGREE OF MASTER OF ENGINEERING.

Candidates must be Bachelors of Applied Seience of at least three years standing, and must produce satisfactory certificates of having been engaged during that time upon *bona fide* work in either the Civil, Mechanical, or Mining Branch of Engineering.

They must pass with credit an Examination extending over the general Theory and Practice of Engineering, in which papers will be set having special reference to that particular branch upon which they have been engaged during the three preceding years.

Candidates must present applications for Examinations, together with the necessary certificates and fees. The Faculty will notify the candidates whether their certificates are satisfactory, and also of the date of the Examination.

III. FOR THE DEGREE OF MASTER OF APPLIED SCIENCE.

Candidates must be Bachelors of Applied Science of at least three years standing, must present certificates of having been employed during that time in some branch of scientific work, and must pass with credit an Examination on the Theory and Practice of those branches of scientific work in which they may have been engaged. The other conditions as under the last heading.

§ VI. ATTENDANCE AND CONDUCT.

The regulations under this head are in all respects the same as those in force for Undergraduates in Arts.

§ VII. LIBRARY AND MUSEUM.

Students in this Faculty have the same privileges with reference to the Library and Museum as Undergraduates in Arts.

---

§ VIII. FEES.

In the Course of Civil Engineering.—$45; Library, $4. In all $49 for each Session.

In the Course of Mechanical Engineering.—$45; Library, $4. In all $49 for each Session.

In the Course of Mining Engineering.—1st Year, $45; 2nd, 3rd and 4th Years $55; Library, $4. In all $49 to $59 for each Session.

In the Course of Chemistry.—1st Year, $45; 2nd, 3rd and 4th Years, $55; Library, $4. In all $49 to $59 for each Session.

Matriculation Fee, for the First and Second Years, $5.

Fee for Degree of Bachelor of Applied Science.—$10.

Fee for Degree of Master of Engineering or Master of Applied Science.—$25.

If for any Special reason the degree of Ma.E. and M.A.Sc. be granted *in absentia* the fee will be $40.

The fees must be paid to the Secretary, and the ticket shown to the Dean within a fortnight after the commencement of attendance in each session. In case of default, the student's name will be removed from the College books, and can be replaced thereon only by permission of the Faculty on payment of a fine of $1.

The B.A.Sc. fee must be paid before the final Examinations.

Laboratory Students are required to purchase their own chemicals, &c. The larger articles of apparatus will be supplied by the Laboratory, the Students being responsible for breakage.

Partial students may be admitted to the Professional Classes in any year, by payment of the ordinary fees for that year; or they may attend the lectures on any subject by payment of a fee of $5 for each term,* except in the case of Chemistry, for which a fee of $10 for each term is required.

Graduates in the Faculty of Applied Science may take further courses on payment of half the ordinary tuition fees.

Students taking Blowpipe Analysis, when it does not form part of their course, are required to pay a fee of $5.

Partial Students may attend the course of Instruction in Meteorology on paying a fee of $5.

---

* The first term ends with the Christmas examinations, the second with the Sessional.

§ IX. COURSES OF LECTURES.

I. CIVIL ENGINEERING AND APPLIED MECHANICS.

Professor:—HENRY T. BOVEY, M.A., M.INST.C.E.

Civil Engineering.

The course of instruction in Civil Engineering will include the following:—Mechanism, Earthwork, Masonry, Carpentry, Structures of Timber, Stone and Iron, the Construction of Common Roads, Rail-Roads, Bridges, Viaducts, Tunnels, Canals, River, Harbour and Sea Works, Drainage Works, Lighthouses, Works connected with Irrigation and Water Supply, etc.

Applied Mechanics.

The subject of Applied Mechanics will be treated under two heads:—

(*a*) The Strength of Materials, embracing a study of Work, Inertia, Energy and Entropy, the Strength, Stiffness, and Resilience of Materials, Beams or Girders, Pillars, Shafts, Structures (*simple and complex*), Earthwork, Retaining Walls and Arches.

(*b*) Hydraulics, comprising the Theory of Hydrostatics and Hydrodynamics, the Flow of Liquids through Orifices, Pipes and Canals, the Action of a Stream on inclined or curved Vanes (*fixed or revolving*), Hydraulic Machines (*Pressure Engines, Vertical Water Wheels, Turbines, Centrifugal Pumps*), Pneumatics.

Heat and Heat-Engines.

The course of instruction in this Department will embrace:—The General Description of the Steam Engine, the Theory of Heat, the Application of Heat to Thermal Machines, the Production of Heat and Steam, and also:—

(*a*) The movement and distribution of Steam, including the action of Steam in a Cylinder, the methods and regulation of the distribution of Steam, Systems of Cut-off, the general disposition of Cylinders, Condensers, &c.

(*b*) The modes of transmission and a consideration of certain special machines.

(*c*) The construction of an Engine, under which head will be considered Rivets, Bolts, Screws, Sockets, Keys, Cylinders, Pistons, Organs of Distribution, Organs of Transmissions.

(*d*) The construction of Special Machines.

Designs, Estimates, &c.

Engineering Students will also prepare designs, specifications, and estimates of such works as are usually undertaken by the Engineer.

Each Student works independently, under the personal supervision of the Professor of Engineering, and makes such drawings and calculations as would be needed were the structure designed to be actually carried out.

II. MECHANICAL ENGINEERING.

Professors :— { HENRY T. BOVEY, M.A., M.I.M.E.
C. H. MCLEOD, MA.E., M.CAN.SOC.C.E.

Mechanism.

The lectures on Mechanism will treat of:—The object and structure of a machine, conversion and modification of motion, aggregation of motion, velocity ratios, linkwork, the teeth of wheels and trains of wheels, indicator diagrams and measurement of H. P., escapements, connections, various elementary combinations. Shop visitation by the class.

Theory of Machines.

This Branch will comprise :—

(*a*) *The transmission of Work*, including the measurement of work, the efficiency of machines, dynamical friction, viscosity, and the methods of transmitting work (*by continuous rotation, oscillation, belts, water, and compressed air*).

(*b*) *The modification of Work and Stores of Energy*, embracing a study of the actual energy of moving pieces, springs and weights.

(*c*) *Governing and Controlling Machines*, including a consideration of uniform effort, variable resistance, machines driven by fluid pressure, differential governors.

(*d*) *Balancing Machinery*.

Mechanical Work.

A course of lectures will be given on the following specific Departments of Mechanical Engineering, and will treat entirely of the principles and results of actual practice :—The different classes of machinery, Belts, Gearing, Forging, Hammers, the Tempering of Steel, Tools, Vice-work, Fitting and Finishing, Lathes and Lathe-work, Planing, Slotting and Shaping Machines, Boring and Drilling, Milling and Milling tools, Screw-cutting, the Slide valve, Standard Measures, Gauging Implements, Riveted Joints, Fastenings, Pipes and Cylinders, Journals, Bearing, Shafting, Linkwork, Pistons and Stuffing Boxes, Lubricators, Moulding and Founding.

Students before obtaining their degree in this course must present certificates of having been employed for at least eight months in Mechanical work-shops.

LOCOMOTIVE DESIGN AND CONSTRUCTION.

SECOND, THIRD AND FOURTH YEARS :—Session 1888-89.

Mr. R. Atkinson, M.CAN.SOC.C.E., of the Canadian Pacific Railway Mechanical Engineering staff, will give a course of lectures at the Candian Pacific Works on the design and construction of Locomotives, comprising :—Boilers, Cylinders, Link-motions, Frames, Engine-trucks, Tenders and Tender-trucks.

III. MINING ENGINEERING.

Professor:—B. J. HARRINGTON, B.A., PH.D.

The object of this course is to give Students a knowledge of the characters and modes of occurrence of various economic minerals, together with the methods employed for their extraction and subsequent treatment.

The lectures on Mining are given during the Third Year, and among the subjects taken up the following may be mentioned;—Blasting and the nature and use of different Explosives, Quarrying, Hydraulic Mining, Boring; the Sinking, Timbering and Tubbing of Shafts; Driving and Timbering of Levels, Underground Conveyance and Hoisting, Drainage and Pumping, Lighting and Ventilation of Mines, special methods of Exploitation employed in the working of Metalliferous Deposits or of Coal Seams, &c. During this year, also, instruction is given in Blowpipe Analysis, the object of which is to enable Students by means of the blowpipe and a few simple re-agents to detect the nature of different Minerals or Ores. On account of the small quantity of apparatus required, and the rapidity with which accurate results may be arrived at, a knowledge of this subject will be found most useful to those engaged in geological or other field-work.

In the Fourth Year a short course of lectures on Metallurgy is given, and assays are made of various Ores, Fuels, &c.

NOTE.—The lectures on Mining and Metallurgy are illustrated by a series of Models.

IV. DESCRIPTIVE GEOMETRY AND SURVEYING.

Professor:—C. H. MCLEOD, MA.E.

Descriptive Geometry.

SECOND YEAR.—(1).—Linear Drawing. (2).—Orthographic projection, including penetrations, developments, sections, etc.

THIRD YEAR.—(1).—Orthographic projection (continued). Tangent planes and normals. Curved surfaces. Graphical determination of spherical triangles. (2).—Spherical projections, including the construction of maps. (3).—Axometric projection. Isometric projection. (4).—Shades and shadows. (5).—Mathematical perspective. Perspective of shades and shadows.

Surveying.

This course is designed to qualify the Student for admission to the practice of Provincial and Dominion Land Surveying. It also affords a practical and theoretical training in field engineering.

SECOND YEAR.—Chain Surveying, Compass Surveying. The use and adjustment of the Transit, Theodolite, Level (Dumpy, Y, and other forms), Sextant, Aneroid Barometer, Plane-table and other field instruments. Contour Surveying. Underground Surveying. Plotting. Practical operations in the field. Calculating areas.

THIRD YEAR.—Topography. Methods of Setting out Work. Curves. Indirect and Barometic Levelling. Hydrographic Surveying. Geodetic Surveying. Practical operations in the field.

NOTE.—The field work is carried out under the personal supervision of the Professor, and is as follows :—(*a*) a chain survey, (*b*) an angular survey, (*c*) a contour survey, (*d*) the location of a line of road, including preliminary surveys, ranging curves, levelling and setting out the work, (*e*) a hydrographic survey. Each student is required to make field notes, and from these to plot all plans and sections required in connection with the above.

At the close of the sessional examinations there is also an optional course for the 3rd year in astronomical observations and triangulations. The former includes latitude, longitude (by lunar culminations), azimuth and time.

FREEHAND AND MODEL DRAWING.

FIRST YEAR:—Session 1888-89.

Instruction in Freehand and Model Drawing will be given by Mr. A. T. Taylor, M.R.I.B.A.

Students in Arts may attend the classes in Freehand Drawing on payment of a fee of $1 per term.

V. CHEMISTRY AND ASSAYING.

Professor :—B. J. HARRINGTON, B.A., PH.D. (Greenshields Professor of Chemistry and Mineralogy.)

Assistant : NEVIL N. EVANS, B.A.SC.

A course of Lectures, illustrated by experiments, is given to all students of the First Year in Applied Science on the Laws of Chemical Combination, Chemical Formulæ and Equations, the preparation and properties of the more important non-metallic and metallic Elements and many of their Compounds, and on the elementary principles of Organic Chemistry. Students taking these lectures must also devote one afternoon a week during the first term, and two afternoons a week during the second term, to practical work in the laboratory.

In the Second and Third Years of the Mining Course instruction will be given in Qualitative and Quantitative Analysis, and Chemistry Students of these years will attend a course of lectures on either Theoretical or Organic Chemistry In the Fourth Year Mining Students will devote themselves chiefly to Mineral Analysis and Assaying, while Practical Chemistry Students may substitute Organic Analysis and the preparation of Organic Compounds for these subjects.

The laboratory is open daily (Saturdays excepted) from 9 a.m. to 1 p.m., and from 2 to 5 p.m.

VI. GEOLOGY.

Professor :—Sir J. W. Dawson, LL.D., F.R.S. (Logan Professor of Geology).
Assistant Professor :—B. J. Harrington, B.A., Ph.D., F.G.S.

Second Year.—A preliminary Course in Zoology, with special reference to Fossil Animals.

Third Year.—Mineralogy (Ordinary and Honour), Lithology, Physical and Chronological Geology and Palæontology, Geology of Canada, Methods of Geological Exploration.

Fourth Year.—Special Studies in Mineralogy and Lithology, Advanced Course in General Geology and Palæontology, Geology of Canada, Practical Geology and Field-work.

Note.—Students in the Mining and Chemistry Courses take the Honour Mineralogy of the Third Year. Mining Students alone take all the subjects of the Fourth Year; Chemistry Students only the Mineralogy and Lithology.

VII. BOTANY.

Professor :—D. P. Penhallow, B.Sc.

Course.—General Morphology and Classification. Descriptive Botany. Flora of Canada. Nutrition and reproduction of plants. Elements of Histology.

VIII. MATHEMATICS AND MATHEMATICAL PHYSICS.

Professor :—G. H. Chandler, M.A.

The lectures in this course are specially designed to meet the requirements of Students of Applied Science; those in Mechanics being introductory to Applied Mechanics. The subjects are as follows:

First Year.—(1) Euclid, six books. (2) Loci, Transversals, &c. (3) Algebra, to Progression. (4) Plane Trigonometry and the use of Mathematical Tables. (5) Elements of Solid Geometry. (6) Geometrical Conic Sections.

Second Year.—(1) Algebra continued. (2) Analytical Geometry. (3) Differential and Integral Calculus. (4) Mechanics.

Third Year.—(1) Mechanics continued. (2) Spherical Trigonometry. (3) Spherical and Practical Astronomy. (4) Revision and continuation of Analytical Geometry and Calculus, with applications to Mechanics, &c.

Fourth Year.—Revision of Analytical Geometry and Calculus.

IX. EXPERIMENTAL PHYSICS.

Professor :—Alexander Johnson, LL.D. (Peter Redpath Professor of Natural Philosophy.)

Students in this Faculty are required to take the course in Experimental Physics provided by the Faculty of Arts.

The subjects for the Session 1888-89 are Electricity and Magnetism.

X. ENGLISH LANGUAGE AND LITERATURE.

PROFESSOR:—CHARLES E. MOYSE, B.A. (Molson Professor of English Language and Literature.)

Lecturer.—PAUL T. LAFLEUR, B.A.

FIRST YEAR.—English Language and Literature.

SECOND YEAR.—A special course on English Composition.

THIRD YEAR.—A special course on English Composition.

XI. GERMAN OR FRENCH.

German:—Professor C. F. A. MARKGRAF, M.A.

French:—Professor P. J. DAREY, M.A., B.C.L.

Students of this Faculty are required to take the course in one of these languages provided by the Faculty of Arts.

XII. METEOROLOGY.

Instruction in Meteorological Observations will be given in the Observatory at hours to suit the convenience of Senior Students.

Certificates will be granted to those Students who pass a satisfactory examination on the construction and use of Meteorological Instruments, and on the general facts of Meteorology.

SPECIAL PROVISION FOR MATRICULATION IN JUNE.

Candidates for matriculation may pass in the examinations for the Associate in Arts commencing June 1st. In the case of schools not in Montreal the papers will be sent if competent Deputy Examiners are provided. Applications for papers and names of Candidates and Deputy Examiners must be sent to the Secretary of the University before May 15th.

N.B.—Students of the Second, Third and Fourth Years will be required to answer satisfactorily a weekly paper on such subjects of the course as shall be determined by the Faculty.

SPECIAL NOTICE.

During Session 1888-89, lectures on professional subjects will be delivered from time to time by eminent engineers and others.

It may also be stated that the headquarters of the Canadian Society of Civil Engineers has been established in Montreal. The Society holds fortnightly meetings, at which papers upon practical current engineering subjects are read and discussed. Undergraduates joining the Society as Students may take part in these meetings, and acquire knowledge of the utmost importance in relation to the practical part of the profession.

§ X. TEXT BOOKS.

Civil Engineering and Applied Mechanics :—Bovey, *Rankine, *Collignon, *Weisbach, Reuleaux.

Machinery, etc. :—Goodeve (new edition), *Willis, Rankine, Kennedy, *Knight, Rose, *Shelley, *Fairbairn, Unwin.

Heat and Heat Engines :— Holmes, *Jamieson, *Maxwell, Tait, Wilson, Rankine, Rigg, Marks.

Moulding and Founding :—Overman.

Materials :—Notes on Building Construction, *Gilmore, Thurston.

Descriptive Geometry :—Millar's Descriptive Geometry.

Surveying :—Gillespie's Land Surveying. (New edition). *Johnsons Surveying.

Geology :—Dana's Geology. Dawson's Handbook of Zoology and Lecture Notes on Geology, *Nicholson's Palæontology, *Geological Survey Reports, *Dawson's Acadian Geology.

Mineralogy :—Dana's Manual, *Dana's Descriptive Mineralogy.

Blowpipe Analysis :—Brush's Determinative Mineralogy and Blowpipe.

Botany :—Gray and Bessey.

Chemistry :—Nichol's Abridgement of Eliot and Storer's Manual of Chemistry, Remsen's Compounds of Carbon Thorpe & Muir's Qualitative Chemical Analysis, Fresenius' Manuals of Qualitative and Quantitative Analysis, *Watts Dictionary of Chemistry, *Roscoe & Schorlemmer's Treatise on Chemistry, *Miller's Elements of Chemistry.

Metallurgy :—Greenwood's Manual of Metallurgy.

Assaying :—Rickett's Notes on Assaying, Chapman's Assay Notes.

Mathematics :—Todhunter's Euclid, Colenso's Algebra (Part 1), Hamblin Smith's Trigonometry, Wilson's Solid Geometry and Conic Sections, Briggs's Analytic Geometry, Peck's Calculus, Goodeve's Principles of Mechanics, Chambers' Practical Mathematics, Chambers' Mathematical Tables.

TABLE OF LECTURES.

Years	Hours.	Monday.	Tuesday.	Wednesday.	Thursday.	Friday.
First Year.	9			Mathematics.	Mathematics.	Mathematics.
	10	Mathematics.	Mathematics.			
	11	English.	French.	French.	French.	English.
	12	Chemistry.	German.	English.	German.	Chemistry.
	2		Pract. Chem. (2nd. Term).	† Freehand Drawing.		Pract. Chem.
	3		Do	Do		Do.
						Do.

* *Books of Reference.*

† The Freehand Drawing Class is also held from 9 to 11 on Saturdays.

TABLE OF LECTURES—(*Continued.*)

Years	Hours.	Monday.	Tuesday.	Wednesday.	Thursday.	Friday.
Second Year.	9	French.		French. German.	Materials.	{ French. { German. (1)
	10	Surveying.	German. (2)	Surveying.	{ Theor. Chem. { Mathematics.	German. (2)
	11	Mathematics.	Zoology.	Mathematics. Botany. †	Zoology.	Mathematics.
	12	Botany. †	Exp. Physics.	German. (1)	Exp. Physics.	English.
	2	Pract. Chem Drawing.	Mechanism.	Pract. Chem. ‡ Drawing.	Drawing. Pract. Chem.	Mechanism.
	3	Drawing.	Drawing.	‡ Drawing.	Do	Drawing.
	4	Mech. Work Drawing.	Do		Do	Do
Third Year.	9	Theory of Structures.	Mathematics.	Machinery. Geology	Materials.	Mineralogy. Mineralogy.
	10	Geology.	French. German. (2)	Mathematics.	French. German. (2) Theor. Chem.	Geology.
	11	Theory of Structures.	English.	German. (3)	Theory of Structures. (Advanced).	German. (3)
	12	Machines.	Exp. Physics.	German.	Exp. Mech.	Mathematics.
	2	Surveying. Pract. Chem.	Theory of Structures. Pract. Chem.	{ Blowpipe. { Analysis.	Pract. Chem. Surveying.	Theory of Structures. Pract. Chem.
	3	Drawing.	Drawing.		Drawing.	Drawing.
	4	Mech. Work. Drawing.	Drawing. Mining.		Drawing.	Do
Fourth Year.	9	Theory of Structures.	Designing. Mathematics	Designing.	Materials.	Designing.
	10	Theory of Structures.	* Metallurgy. Designing.	Do	Machines.	Designing.
	11	Machines. Geology.*	Do		Theory of Structures.	Geology.*
	12		Do	Geology. *	Theory of Structures. (Advanced)	Mathematics.
	2	Pract. Chem. Assaying. Designing.	Theory of Structures. Pract. Chem.	Pract. Chem.	Pract. Chem. Assaying. Designing	Theory of Structures.
	3	Do	Hydraulics. (*a*) Steam. (*a*)	Do	Do	Hydraulics. (*a*) Steam. (*a*)
	4	Do	Th. of Strt. (adv.)	Do	Do	Do

* For Mining and Chemistry Students. (*a*) Steam during first term; Hydraulics during second term.

Field work for Students of the 2nd year on Mondays, Tuesdays, Wednesdays and Thursdays; for Students of the Third Year on Mondays, Wednesdays and Thursdays, during the months of September and October.

† For Practical Chemistry Students. ‡ For Mining Students only.

Faculty of Medicine.

THE PRINCIPAL (ex-officio).

Professors:

WRIGHT,	ROSS,	WILKINS,
HOWARD,	RODDICK,	PENHALLOW,
MACCALLUM,	GARDNER,	MACDONNELL,
CRAIK,	SHEPHERD,	MILLS,
FENWICK,	BULLER,	CAMERON.
GIRDWOOD,	STEWART,	

Dean.—R. P. HOWARD, M.D.
Registrar.—J. STEWART, M.D.
Librarian.—F. J. SHEPHERD, M.D.

The Fifty-Sixth Session of the Faculty will be opened on Monday, October 1st, 1888, by an introductory lecture at 3 p.m. The regular lectures will begin on October second, at the hours specified in the time-table, and will be continued for six months.

The Medical School of McGill University was founded in 1824, as the "Medical Institution," by Drs. John Stephenson, Andrew F. Holmes, William Robertson and William Caldwell. In 1829 the Medical Institution became the Medical Faculty of McGill College. There were no Sessions during the political troubles, from 1836 to 1839, and it is owing to this gap that the present is the 56th Session of the Faculty. In reality this is the 60th Session of the School, which is the direct continuation of the Medical Institution.

The new building of the Medical Faculty, which was opened in the year 1885, is one of the most complete structures of its kind on this continent or elsewhere. It has been found admirably adapted for the fulfilment of the great aim of the Faculty—to make

the teaching of the primary branches as practical and as thorough as possible. The facilities now possessed by the Faculty for the above purpose are equal to those of the most advanced European medical schools.

Through the great liberality of Sir Donald A. Smith in founding "the Leanchoil Endowment," and of the citizens of Montreal and Medical Graduates in subscribing to the "Campbell Memorial Fund," the Faculty are enabled much more thoroughly to conduct and maintain the teaching of the different branches of the medical course in an ample state of efficiency.

LABORATORIES, &c.

In addition to the laboratories and dissecting room, there are two large lecture rooms, each capable of comfortably seating 300 students, and one small demonstration room for classes of fifty and under. The space allotted to the library and museum has been largely increased. A large reading room, waiting and cloak rooms have been provided for students.

DISSECTING ROOM.

The Dissecting Room, which is situated on the second floor, is 76 feet in length and 31 feet in breadth. It is furnished with twenty tables, and is well lighted for work during the day and night. In procuring appliances for the comfort and convenience of the students no reasonable expense has been spared.

In connection with the dissecting room, there is a "Bone room," where students have an excellent opportunity of studying osteology. There are also two distinct rooms for the demonstrators of anatomy.

PHYSIOLOGICAL LABORATORY.

The Physiological Laboratory, which is situated on the ground floor, is supplied with the most modern apparatus for the practical teaching of this most important branch of the medical curriculum. It contains among other valuable instruments: kymographs, various manometers, etc., for demonstrating blood pressure; myographs, rheocords, moist chambers, etc., and various electrical appliances for demonstrating experiments in connection with nerve and muscle;

special apparatus for illustrating various points in respiration; apparatus specially suitable for demonstrating the processes of digestion, as well as the chemical composition and nature of the secretions, and the chief constitutents of the tissues and nutritive fluids. The laboratory is arranged in such a way as to permit of students assisting at, and taking part in, these demonstrations. During the present summer considerable additions will be made to the physiological apparatus.

HISTOLOGICAL LABORATORY.

The Histological Laboratory is a large, well-lighted room on the second floor. It is so arranged that over eighty students can be present at the microscopical demonstrations. For this purpose it is supplied with thirty-five microscopes, all from the well-known makers Zeiss, Hartnack and Leitz. From the large number of microscopes employed, students will have special facilities in studying and making themselves thoroughly acquainted with the specimens that are the subjects of demonstration.

PHARMACOLOGICAL LABORATORY.

The Pharmacological Laboratory is a large room, situated on the ground floor, and is now furnished with the necessary appliances for the practical teaching of pharmacy.

CHEMICAL LABORATORY.

The Chemical Laboratory is large, lofty, and well lighted, and can accommodate comfortably 76 men at one time. Each student, when entering on this course, has a numbered table in the laboratory assigned to him for his use during the session. Each table has its own gas and water fixtures, and is provided with shelves for its corresponding set of reagent bottles, as well as drawer and locker, containing a modern set of chemical apparatus especially adapted for the work. This apparatus is provided by the Professor of Chemistry, and supplied to each student without extra charge. The student is only required to pay for apparatus broken or destroyed.

The laboratory is furnished with large draught closet for ventilation, sulphuretted hydrogen apparatus, gas and combustion furnaces,

etc., giving to the student unsurpassed advantages for acquiring a sound and practical knowledge of medical chemistry.

PATHOLOGICAL LABORATORY.

In the Pathological Laboratory accommodation will be provided for students or practitioners who desire to carry on private pathological research.

The recent additions made to the laboratory including a suite of rooms, exclusively devoted to the study and culture of Bacteria, furnished with a complete outfit of the best modern apparatus for this purpose, including sterilizer, thermostat, &c., &c.

The demonstrations in Morbid Anatomy will be given in a small laboratory, specially arranged for the work.

The classes in Pathological Histology will be held in the Histological Laboratory.

The class tickets for the various courses are accepted as qualifying candidates for examination before the various Colleges and Licensing bodies of Great Britain nd Ireland, and the College of Physicians and Surgeons of Ontario. The degree in Medicine of this University carries with it at the Licensing Boards of Great Britain the same exemptions in certain subjects as are granted to all colonial degrees.

To meet the circumstances of the General Practitioners in British North America, where there is no division of the profession into Physicians and Surgeons exclusively, the degree awarded upon graduation is that of "Doctor of Medicine and Master of Surgery," in accordance with the general nature and character of the curriculum, as fully specified hereafter. The degree is received by the College of Physicians and Surgeons of the Province of Quebec.

---

§ I.—MATRICULATION.

It is very important that intending Students should bear in mind the following :—

(1) If residents of Ontario, and desirous of obtaining the license of that Province, they must conform to the regulations regarding the Preliminary Examination, and register before beginning their medical studies. They may at their option take the Matriculation examination in Arts of this University instead of that in Medicine.

These Examinations are held in Montreal, on June 1st and following days, and on September 17th and following days. Papers for the June examinations may be sent to Collegiate Institutes or High Schools in Ontario on application before May 15th to the Secretary of the University. Details of the examination will be found in the announcement of the Faculty of Arts.

(2) If residents of the Province of Quebec, and desirous of obtaining the license of that Province, they must pass the Matriculation Examination of the Quebec Medical Board before beginning their medical studies.

(3) Residents of the Maritime Provinces, and of Manitoba or British Columbia, may present themselves before the Local Medical Boards for the Preliminary Examination. Where the Examination and Standard are equivalent to those of this University, a certificate (bearing the standing of the candidate in various subjects) will be accepted, and the students may register without further examination or fee.

(A).—UNIVERSITY MATRICULATION EXAMINATION.

Graduates in Arts are exempt from the Matriculation Examinations. Other Candidates may pass either the Arts or Medical Matriculation of this University. Details as to the former will be found in the announcement of the Faculty of Arts. The latter is the same as that recommended by the Medical Council of Great Britain. Examinations will be held on the last Friday and Saturday in March, and the third Friday and Saturday in September of each year. Applications may be made to the Registrar of the Faculty till the evening of the previous day. The requirements of the standard for Matriculation are:—(1) English Language, including Grammar and Composition.* (2) English History. (3) Modern Geography. (4) Latin, including Translation from the original and Grammar. (5)

* The ability of the candidate will be fully tested in the following:—"(1) To write sentences in English on a given theme, attention being given to spelling and punctuation as well as to composition; (2) to write correctly from dictation; (3) to explain the grammatical construction of sentences; (4) to point out the grammatical errors in sentences ungrammatically composed, and to explain their nature; and (5) to give the derivation and definition of English words in common use."

Elements of Mathematics, comprising (*a*) Arithmetic, including Vulgar and Decimal Fractions; (*b*) Algebra, including simple Equations; (*c*) Geometry, including the first two books of Euclid, or the subjects thereof. (6) Elementary Mechanics of solids and Fluids, comprising the elements of Statics, Dynamics and Hydrostatics. (7) One of the following optional subjects :—(*a*) Greek, (*b*) French, (*c*) German, (*d*) Italian, (*e*) any other modern language, (*f*) Logic, (*g*) Botany, (*h*) Elementary Chemistry.

[These examinations fulfil the requirements of the University for entrance; but students are advised to consult the requirements of the Medical Acts in the Provinces in which they may intend to practise.]

TEXT-BOOKS.—LATIN.—Cicero, Orations 1 and 2 against Cataline; Virgil, Æneid, Bk. I. GREEK.—Xenophon, Anabasis, Bk. I., or equivalent. FRENCH.—Charles XII., Two Books. NATURAL PHILOSOPHY. Ganot's Physics. BOTANY. ELEMENTARY CHEMISTRY.

(B). MATRICULATION EXAMINATION OF THE COLLEGE OF PHYSICIANS AND SURGEONS OF QUEBEC.

[This is imperative on all students intending to practise in Quebec.]

Compulsory Subjects.

LATIN.—Cæsar's Commentaries, Books I, II, III, IV.—Virgil's Æneid, Books I II, V.—The Odes of Horace, Book III.

ENGLISH.—Sprague's "Six Selections from Washington Irving's Sketch Book." —A play of Shakespeare, viz., Henry V.

FRENCH.—Fénélon's "Adventures de Télémaque."—Molière's "Le Bourgeois Gentilhomme."

BELLES LETTRES.—Principles of the subject. History of the Literature of the age of Pericles in Greece, of Augustus in Rome, of Elizabeth in England, and Louis XIV. in France.

HISTORY.—Outlines of the History of Greece and Rome, with particular knowledge of England, France and Canada.

GEOGRAPHY.—A general view, with particular knowledge of England, France and North America.

ARITHMETIC.—Must include Vulgar and Decimal Fractions, Simple and Compound Proportion, Interest and Percentages, and Square Root.

ALGEBRA.—Must include Fractions and Simultaneous Equations of the First Degree.

GEOMETRY.—Euclid, Books I., II., III., or the portion of Plane Geometry covered by these Books. Also the measurement of the lines, surfaces and volumes of regular geometrical figures.

Optional Subjects.

GREEK.—Xenophon's Anabasis, Book I.—Homer's Iliad, Book I.
PHYSICS.—Outlines of the subject, as in Ganot's Physics, translated by Atkinson.
PHILOSOPHY.—Elements of Logic and of Moral Philosophy, as in Jevon's Logic and Calderwood's Hand-book of Moral Philosophy.

The Examinations will be held upon the 1888, at Quebec, and on the 1889, at Montreal. Applications to be made to Dr. F. W. Campbell, Montreal, or Dr. Belleau, Quebec, either of whom will furnish schedule giving text-books and percentage of marks to be obtained.

---

§ II.—ENREGISTRATION AND PAYMENT OF FEES.

The following are the University Regulations:—

All Students desirous of attending the Medical Lectures shall, at the commencement of each Session, enrol their names and residences in the Register of the Medical Faculty, and procure from the Registrar a ticket of Enregistration, for which each Student shall pay a fee of $5: excepting in the Clinical Classes, in which Enregistration for Students for other Schools shall not be compulsory.

The said register shall be closed on the last day of October in each year. The fees are payable to, and all class tickets will be issued by, the Registrar, and must be paid in advance, (except under special circumstances) at the time of enregistration.

Enregistration in the Summer Session is compulsory upon all Students, whether attending one or more of the classes.

---

§ III. COURSES OF LECTURES.

ANATOMY.

PROFESSOR, FRANCIS J. SHEPHERD.

Anatomy is taught in the most practical manner possible, and its relation to Medicine and Surgery fully considered. The lectures are illustrated by the fresh subject, moist and dry preparations, sections, models and plates, and drawings on the blackboard.

PRACTICAL ANATOMY.

Demonstrator, RICHARD L. MACDONNELL.

Assistant Demonstrators, { WILLIAM R. SUTHERLAND. R. J. B. HOWARD.

Special attention is devoted to this important branch, the teaching being similar to that of the best European schools. The Dissecting Room is open from 8 a.m. to 10 p.m.; the Demonstrators' hours are from 10 to 12 a.m., and 8 to 10 p.m. Special Demonstrations on the Brain, Thorax, Abdomen, Bones, &c., are frequently given. Every Student must be examined *at least* three times on each part dissected; and if the examinations are satisfactory, a certificate is given. Prizes are awarded at the end of the Session for the best examination on the fresh subject. Abundance of material provided.

CHEMISTRY.

PROFESSOR, GILBERT P. GIRDWOOD.

Inorganic Chemistry is fully treated; a large portion of the course is devoted to Organic Chemistry and its relations to Physiology. The branches of Physics bearing upon or connected with Chemistry also engage the attention of the Class. For experimental illustration abundant apparatus is possessed by the College.

The Chemical Laboratory will be open to members of the class to repeat experiments performed during the course, under the superintendence of the Professor or his Assistant.

PRACTICAL CHEMISTRY.

PROFESSOR, GILBERT P. GIRDWOOD.

Lecturer, R. F. RUTTAN.

The course in practical chemistry includes two hours' laboratory work three times a week, for three months. The Students are instructed individually in chemical manipulations, blow-pipe analysis, and qualitative determination of the salts, acids, &c., they will require to use in practice. They are required before finishing the course to be familiar with the principles of practical Forensic and Sanitary Chemistry. Special attention is directed to instructing the Student in making accurate notes of his experiments and his conclusions. These notes are examined daily and criticised.

PHYSIOLOGY.

PROFESSOR, T. WESLEY MILLS.

The purpose of this Course is to make Students thoroughly acquainted, as far as time permits, with modern Physiology: its methods, its deductions, and the

basis on which the latter rest. Accordingly a full course of lectures is given, in which both the Experimental and Chemical department of the subject receive attention.

In addition to the use of diagrams, plates, models, &c., every department of the subject is experimentally illustrated. The experiments are free from elaborate *technique*, and many of them are of a kind susceptible of ready imitation by the Student.

Laboratory work for Senior Students:—

(1) During the first part of the Session there will be an optional course on Physiological Chemistry, in which the Student will, under direction, investigate food-stuffs, digestive action, blood, and the more important secretions and excretions, including urine. All the apparatus and material for this course will be provided.

(2) The remainder of the Session will be devoted to the performance of such experiments as are unsuitable for demonstration to a large class in the lecture room, and such as require the use of elaborate methods, apparatus, &c. There will be no extra fee for this part of the course.

As far as possible, senior Students who do not share in the above courses will be given an opportunity to take some practical part in the physiological work.

HISTOLOGY.

PROFESSOR, GEO. WILKINS.

This will consist of a course of ten lectures, and twenty-five weekly demonstrations with the Microscope. As the demonstrations will be chiefly relied upon for teaching the Microscopic Anatomy of the various structures, the specimens under observation will then be minutely described. Plates and diagrams specially prepared for these lectures will be freely made use of.

Practical Histology.—This is an optional course given by Prof. Wilkins for the purpose, more especially, of teaching Microscopy. It will consist of twenty-five lessons of two hours each. Each Student will be provided with a Microscope and shewn how to use it, and also how to cut, stain and mount specimens for microscopical investigation.

For the purpose of enabling students to observe the different effects of staining, &c., on diseased and healthy structures, a few diseased specimens will be given them to prepare, in the latter part of the course. Students are at liberty to keep all the specimens they prepare. One of the great advantages of this course is that students will be able to collect a cabinet of 100 or more specimens for reference at any time; these, besides being of great help to them during their College course, they will find especially useful when in active practice for the purpose of comparison with diseased growths. Re-agents, and everything except cover-glasses and cabinet cases, provided. Fee, $12.

THE MICROSCOPE IN MEDICINE.

DRS. WILKINS AND W. G. JOHNSTON.

This is an optional class for third and fourth year Students, and has been divided into two courses. (1) Pathological Histology, 20 lessons (two hours each), given during the winter, in which special attention will be paid to the microscopical study of pathological anatomy, and methods of preparing specimens. Each student will prepare and mount for himself a cabinet of 100 specimens, illustrating all the principal lesions of disease. (2) Clinical Microscopy, 20 lessons in the summer session, affording a systematic training in the use of the microscope in the diagnosis of disease, the examination of urine, sputum, blood, pus, tumors and parasites of all kinds. Fee for either course alone $12, for both courses $18.

PHARMACOLOGY AND THERAPEUTICS.

PROFESSOR, JAMES STEWART.

The course on this subject deals for the most part with the pharmacology and therapeutics of the different medicinal agents. A good deal of attention will be given to the "untoward effects" of drugs, and when possible these will be illustrated by the exhibition of living specimens.

The leading officinal agents of the British Pharmacopœia will be fully considered, as will also those drugs of recent introduction into practice which have been found useful, but have not, as yet, found their way into the Pharmacopœia. The following groups of medicinal agents will, on account of their great importance, receive special attention:—1, Cardiac Tonics; 2 Cardiac Depressants; 3, Motor Stimulants; 4, Motor Depressants; 5, Anæsthetics; 6, Analgesics; 7, Mydriatics; 8, Alteratives; 9, Hæmatinics; 10, Astringents; 11, Purgatives; 12, Digestants; 13, Nutritives; 14, Antiseptics; 15, Antipyretics; 16, Diuretics.

In future one of the five weekly lectures will be given in the theatre of the General Hospital on Clinical Therapeutics.

MEDICINE.

PROFESSOR, R. PALMER HOWARD.

While the lectures on this subject are mainly devoted to Special Pathology and Therapeutics, no opportunity is lost of illustrating and explaining the *general* laws of disease. With the exception of certain affections seldom or never observed in this country, all the important internal diseases of the body, except those peculiar to women and children, are discussed, and their Pathological Anatomy illustrated by the large collection of morbid preparations in the University Museum, and by fresh specimens contributed by the Demonstrator of Morbid Anatomy.

The College possesses an extensive series of Anatomical plates, illustrative of the Histological and Anatomical appearances of disease, and the wards of the General Hospital afford the lecturer ample opportunities to refer to living examples of very many of the maladies he describes, and to give the results of treatment.

CLINICAL MEDICINE.

PROFESSOR, GEORGE ROSS.

Attendance is given the Medical Wards of the Montreal General Hospital on three days of every week, with the 3rd year students, and three days with those of the 4th year. Accurate reports of all cases are kept by duly appointed clinical clerks, and are systematically read before the class. Instruction is given at the bedside, and special inducements are offered to every pupil to take part in the physical examination of patients. The mode of conducting investigation, the use of the microscope, the value of the thermometer and ophthalmoscope, &c., in medical diagnosis, are all explained and illustrated. Senior Students are called upon in rotation to examine new cases before the class, and to be examined thereon as to their general knowledge. In addition, one weekly Clinical Lecture is delivered, bearing upon some case or cases of importance which may happen to be under observation at the time. Special attention is directed to Medical Anatomy, and candidates for the degree will be examined thereon.

SURGERY.

PROFESSOR, GEO. E. FENWICK.

The first part of this course consists of Surgical Pathology, illustrated by a large collection of preparations from the College Museum, also specimens as they are obtained from cases under observation at the Hospital, and contributed to that collection by the Hospital pathologist, and from private sources. The second part of the course is devoted to the practice of Surgery, in which attention is drawn to cases which have been observed by the class during the previous summer session. The various surgical appliances are exhibited, and their uses and application explained. Surgical Anatomy and Operative Surgery form a special department of this course, and Quain's and Maclise's plates are used in illustration.

CLINICAL SURGERY.

PROFESSOR, THOMAS G. RODDICK.

This course is eminently practical, consisting of bedside instruction and lectures delivered weekly, illustrative of surgical cases actually present in the wards of the General Hospital. The class is separated into junior and senior divisions, which are taken charge of by the Professor on alternate days, when the reports of the Clinical clerks are read and criticised, and fresh cases are examined by the senior

students. The surgical dressings are, as much as possible, reserved for these occasions, so as to give all present an opportunity of participating in the application of splints to fractures, dressing of wounds, minor operations, &c. Major operations are performed in the theatre attached to the Hospital, which is so constructed that the most distant can obtain a fair view of the operations. All the recently invented appliances for the treatment of surgical diseases have been introduced into the Hospital.

MIDWIFERY.

PROFESSOR, J. C. CAMERON.

This course will embrace: 1. Lectures on the principles and practice of the obstetric art, illustrated by diagrams, fresh and preserved specimens, the artificial pelvis, &c. 2. Bedside instruction in the University Maternity, including the management and after-treatment of cases. 3. A complete course on obstetric operations with the phantom and preserved fœtuses, in which each final student will perform the various manipulations and operations. The Diseases of Infancy.

GYNÆCOLOGY.

PROFESSOR, WM. GARDNER.

The course on this subject will comprise two lectures a week throughout the session. The anatomy and physiology of the parts concerned will be first discussed. Then the various methods of examination will be fully described, the necessary instruments exhibited, and their uses explained. After this, the diseases peculiar to the sex will be considered as fully as time will permit, in the following order:—Disorders of Menstruation; Leucorrhœa, its causes and treatment; Pelvic Cellulitis and Peritonitis; Lacerations of the Cervix Uteri and Perineum; Urinary and Fæcal Fistulæ; Inflammations of the Uterus; Displacements of the Uterus; Tumors of the Uterus; Diseases of the Ovaries.

The lectures will be illustrated as fully as possible by drawings and morbid specimens. The Gynæcological Clinic of the General Hospital furnishes the Professor with ample material to illustrate the subjects considered in the didactic lectures.

MEDICAL JURISPRUDENCE.

PROFESSOR, GEO. WILKINS.

This course includes Insanity, the subject being treated of in its Medical as well as Medico-legal aspects. Special attention is devoted to the subject of blood stains, the Clinical, Microscopic and Spectroscopic tests for which are fully described and shown to the class. The various spectra of blood in its different conditions are shewn by Zeiss' Microspectroscope, so well adapted for shewing the reactions with exceedingly minute quantities of suspected material. Recent researches in

the diagnosis of human from animal blood are alluded to. In addition to the other subjects usually included in a course of this kind, Toxicology is taken up. The modes of action of poisons, general evidence of poisoning, and classification of poisons are first treated of, after which the more common poisons are described, with reference to symptoms, post-mortem appearances, and chemical tests. The post-mortem appearances are illustrated by plates, and the tests are shown to the class.

OPHTHALMOLOGY AND OTOLOGY.

PROFESSOR, FRANK BULLER.

Will include a course of lectures on diseases of the Eye and the Ear, both Didactic and Clinical. In the former the general principles of diagnosis and treatment will be dealt with; in the latter, cases illustrative of the typical forms of ordinary diseases of these organs will be exhibited and explained to the class, and afterwards placed under the special care of gentlemen who may show themselves competent to take charge of them. A course of operations on the cadaver will be open to such students as may wish to avail themselves of the same.

HYGIENE.

PROFESSOR, R. L. MACDONNELL.

This course of Lectures will be delivered during the summer session only. It comprises lectures on Drinking-water and Public Water Supplies; conditions of Soil and Water as affecting health, including Drainage and the various methods for the removal of Excreta; the Atmosphere, including Heating and Ventilation; Individual Hygiene, comprising the subjects of Food and Drink; Physical Exercise and Bathing; discussion of the respective merits of the various forms of each, precautions, contra-indications, &c. Village Sanitary Associations; Mutual Protective Sanitary Associations for cities.

BOTANY.

PROFESSOR, D. P. PENHALLOW.

The course in Botany includes General Morphology, Histology, Physiology and Classification. It is designed to give special prominence to Physiology, which will be made comparative whenever practicable. The course is illustrated by the microscope and gas microscope, and by the collection, models and apparatus in the Peter Redpath Museum.

ZOOLOGY.

PROFESSOR, SIR WILLIAM DAWSON.

This course includes a systematic study of the classification of animals, illustrated by Canadian examples, and by the collections in the Peter Redpath Museum.

It affords suitable preparation for collecting in any department of Canadian Zoology or Palæontology, and an introduction to Comparative Physiology. It may be taken instead of Botany ; or along with it, without any additional fee.

Students in Botany or Zoology will receive tickets to the Peter Redpath Museum, and to the Museum of the Natural History Society of Montreal.

PATHOLOGY.

W. G. JOHNSTON, DEMONSTRATOR.

This Course Comprises :—

1. Twenty-five lectures on General Pathology to students of the 3rd year.

2. Pathological Demonstrations weekly—Saturday at 10 a.m. Specimens of all kinds collected during the week, and their gross and microscopic appearances are demonstrated to the final classes. In addition, special demonstrations in Pathological Histology are given throughout the session.

3. Instruction in Post-Mortems. The Autopsy Room of the General Hospital is in charge of the Demonstrator. The post mortems are performed by the students in rotation under his direction, and systematic demonstrations of post-mortem methods, including those to be followed in Medico-legal cases, will also be given.

EXTRACTS FROM THE UNIVERSITY REGULATIONS WITH RESPECT TO THE COURSES OF LECTURES.

1st. Each Professor shall deliver at least five Lectures during the week, except in Medical Jurisprudence and Botany, if extended through six months, in which case three Lectures a week will suffice.

2nd. Every Lecture shall be of one hour's duration.

3rd. Every Professor shall occasionally examine his class upon the subjects treated of in his preceding Lectures, and every such examination shall be considered as a Lecture.

4th. A roll of the names of the Students attending each class shall be called from time to time.

---

§ IV. QUALIFICATIONS FOR THE DEGREE.

The following are Extracts from the Regulations respecting the qualifications of Candidates for the Degree in Medicine :—

1st. No one entering after October 1st, 1888, will be admitted to the Degree of Doctor of Medicine and Master of Surgery, who shall not have attended Lectures for a period of at least four six months' sessions and one three months' summer session* in this University, or some other University, College or School of Medicine, approved of by this University.

2nd. Candidates for Final Examination shall furnish Testimonials of attendance on the following branches of Medical Education, viz.:—

Anatomy.	Of which Two Courses will be required of Six Months' duration.
Practical Anatomy.	
Physiology.	
Chemistry.	
Materia Medica and Therapeutics.	
Principles and Practice of Surgery.	
Midwifery and Diseases of Women and Children.	
Theory and Practice of Medicine.	
Clinical Medicine.	
Clinical Surgery.	
Medical Jurisprudence.	Of which One Course of Six Months, or Two Courses of Three Months will be required.
Practical Chemistry.	Of which One Course will be required of Three Months' duration.
Botany or Zoology.	
Hygiene.	
Histology.	Ten Lectures and Twenty-five Demonstrations.
General Pathology.	Twenty-five Lectures.

Provided, however, that Testimonials equivalent to, though not precisely the same as those above stated, may be presented and accepted.

3rd. The Candidate must give proof by ticket of having attended during eighteen months the practice of the Montreal General Hospital, or that of some other Hospital approved of by this University, and of having compounded medicines for six months.

4th. He must also give proof by ticket of having attended for at least six months the practice of the Montreal, or other Lying-in-Hospital, approved of by this University, and of having attended at least six cases of labor.

5th. No one will be permitted to become a Candidate for examination who shall not have attended at least one Session of this University, and one full course of all the branches included in its curriculum.

6th. Courses of less length than the above will only be received for the time over which they have extended.

*To be taken after 3rd Winter Session.

7th. Students, except by special permission of the Faculty, must pursue the subjects of Anatomy, Chemistry, Histology and Botany in their first session, and are advised to take Physiology in addition.

8th. Candidates who fail to pass in a subject of which two courses are required must attend a third course, and furnish certificates of attendance thereon.

A course in Practical Anatomy will be accepted as equivalent to a third course of lectures in General and Descriptive Anatomy.

9th. Supplemental examinations will not be granted, except by special permission of the Medical Faculty, and on written application, stating reasons.

10th. The requirements for the summer session, when as at present taken after the third winter session, shall be :—

(*a.*) Daily Hospital attendance;

(*b.*) Maternity attendance; and

(*c.*) Any two weekly clinics in addition to the clinics on General Medicine and Surgery.

11th. Every Candidate for the Degree must, on or before the fifteenth of February, present to the Registrar of the Medical Faculty testimonials of his qualifications, entitling him to an examination, and must at the same time deliver to the Registrar of the Faculty the following Certificate :—

MONTREAL, ———18—

I, the undersigned, being desirous of obtaining the Degree of Doctor of Medicine and Master of Surgery, do hereby declare that I have attained the age of twenty-one years, or (if the case be otherwise) that I shall have attained the age of twenty-one years before the next graduation day, and that I am not (or shall not be at that time) under articles as a pupil or apprentice to any Physician, Surgeon, or Apothecary.

(Signed), A.B.

12th. The trials to be undergone by the Candidate shall be such as are referred to under Section V.

13th. The following Oath or affirmation will be exacted from the Candidate before receiving his degree :—

SPONSIO ACADEMICA.

In Facultate Medicinæ Universitatis.

Ego, A———B———, Doctoratus in Arte Medica, titulo jam donandus, sancto coram Deo cordium scrutatore, spondeo;—me in omnibus grati animi officiis erga hanc Universitatem, ad extremum vitæ halitum, perseveraturum; tum porro artem medicam caute, caste, et probe exercitaturum; et quoad in me est, omnia ad ægrotorum corporum salutem conducentia, cum fide procuraturum; quæ denique, inter medendum, visa vel audita silere conveniat, non sine gravi causa vulgaturum. Ita præsens mihi spondenti adsit Numen.

14th. The fee for the Degree of Doctor of Medicine and Master of Surgery shall be thirty dollars, to be paid by the successful candidate immediately after examination.

§ V.--EXAMINATIONS.

Weekly examinations are held to test the progress of the Student; and in addition two or three written examinations are given throughout the Session.

The examinations at the close of each Session are arranged as follows:—

FIRST YEAR.

Pass Examination in BOTANY and HISTOLOGY.

Sessional Examination in ANATOMY, CHEMISTRY, and PHYSIOLOGY.

A maximum of one hundred marks will be allowed for the Sessional Examination in each subject, which marks shall be reckoned in the ranking of the candidate after the examination of the following year.

SECOND YEAR.

Pass Examination in ANATOMY, CHEMISTRY, PRACTICAL CHEMISTRY and PHYSIOLOGY.

Sessional Examination in PHARMACOLOGY and THERAPEUTICS.

One hundred marks will be allowed for the Sessional Examination, which marks shall be reckoned in the ranking of the candidate after the examination of the following year.

THIRD YEAR.

Pass Examination in PHARMACOLOGY and THERAPEUTICS, MEDICAL JURISPRUDENCE, HYGIENE* and PATHOLOGY.

FOURTH YEAR.

Pass Examination in MEDICINE, SURGERY, OBSTETRICS, CLINICAL MEDICINE, CLINICAL SURGERY.

By means of the above arrangement a certain definite amount of work must be accomplished in each year, and an equitable division is made between the Primary and Final branches.

With regard to the Primary Examination at the end of the second year, it remains optional with the Student whether he passes in all the branches or leaves two for the third year. In any case, Chemistry and one other must be taken at the close of the second year.

---

§ VI. MEDALS AND PRIZES.

1st. The Holmes Gold Medal, awarded to the Student of the

* The examinations in Hygiene are held at the close of the summer session.

graduating class who receives the highest aggregate number of marks for the best examinations, written and oral, in both Primary and Final branches.

The Student who gains the Holmes Medal has the option of exchanging it for a Bronze Medal, and the money equivalent of the Gold Medal.

2nd. A Prize in Books awarded for the best examination, written and oral, in the Final branches. The gold medallist is not permitted to compete for this prize.

3rd. A Prize in Books awarded for the best examination, written and oral, in the Primary branches.

4th. The Sutherland Gold Medal, awarded for the best examination in Theoretical and Practical Chemistry, together with creditable examination in the Primary branches.

5th. A Prize in Books for the best examination in Practical Anatomy.

6th. A Prize in Books for the best examination in Botany; also a prize of $20 for the best named collection of Canadian plants.†

§ VII. FEES.

Distributed according to years, the Class Fees are as follows:—

FIRST YEAR.

Anatomy	$12	Botany	$5
Physiology	12	Dissecting Material	5
Histology	6	Enregistration	5
Chemistry	12		
Practical Anatomy	12	Total	$69

SECOND YEAR.

Anatomy	$12	Hygiene	6
Practical Anatomy	12	Practical Physiology	6
Physiology	12	Dissecting Material	5
Chemistry	12	Enregistration	5
Practical Chemistry	12		
Chemical Reagents	3	Total	$97
Materia Medica	12		

† This Prize is open to both Medical and Arts Students.

THIRD YEAR.

Medicine	12	Medical Jurisprudence	10
Materia Medica	12	Pathology	10
Clinical Medicine	12	Enregistration	5
Surgery	12		
Clinical Surgery	12	Total	$97
Midwifery and Gynæcology	12		

FOURTH YEAR.

Medicine	$12	Enregistration	5
Surgery	12		
Clinical Medicine	12	Total	$65
Clinical Surgery	12	Summer Session	25
Midwifery and Gynæcology	12		

HOSPITAL FEES.

Montreal General Hospital, Perpetual Ticket	$20
Montreal Maternity	8
Total	$28
Graduation Fee	30
Matriculation Fee, payable only if the Student takes the University Matriculation	5
Total Collegiate and Hospital expenses, spread over four years, about	$400

It is to be understood that a Student, wishing to take any other class than that of his year can do so on payment of the class fee.

Fees are payable in advance to the Registrar, at the time of enregistration.

Cheques or P.O. Orders for Fees may be transmitted direct to the Registrar, who will furnish official receipts therefor.

---

§ VIII. TEXT-BOOKS.

ANATOMY.—Gray, Wilson, Quain (Eng. Ed.).

PRACTICAL ANATOMY.—Heath's Dissector, Ellis' Dissector, Holden's Dissector, and Landmark's.

PHYSICS.—Balfour Stewart.

INORGANIC CHEMISTRY.—Wurtz, Millar.

ORGANIC CHEMISTRY.—Armstrong.

PRACTICAL CHEMISTRY.—Odling, Galloway, Fresenius.

PHARMACOLOGY and THERAPEUTICS.—Wood, Lauder Brunton, Whitla, and Bruce.

PHYSIOLOGY.—Huxley's *Elementary Lessons*, Yeo, Foster, Prof. Mills' Outlines of Lectures.

PATHOLOGY.—Orth's Diagnosis in Pathology.

HISTOLOGY.—Klein's Elements, Schafer's Essentials of Histology.

SURGERY.—Holmes' Surgery (Eng. Ed.), Erichsen, Druitt, Bryant.

PRACTICE OF MEDICINE.—Flint, Roberts, Bristowe, DaCosta, Fagge.

FOR REFERENCE.—Pepper's System of Medicine.

CLINICAL MEDICINE.—Graham Brown's Manual of Diagnosis, Finlayson's Clinical Manual, Flint on Auscultation and Percussion, and Loomis on Physical Diagnosis.

MEDICAL JURISPRUDENCE.—Husband, Guy and Ferrier, Reese.

MIDWIFERY.—Lusk, Galabin.

GYNÆCOLOGY.—Edis, Goodell's Lessons, Hart and Barbour's Manual, Thornburn.

HYGIENE.—Parks, Wilson (Eng. Ed.).

BOTANY.—Gray's Text-Book of Histology and Physiology.

ZOOLOGY.—Dawson's Handbook of Canadian Zoology.

---

§ IX. MUSEUM.

CURATOR, W. R. SUTHERLAND, M.D.

Most of the usual Pathological Specimens are collected here, obtained from Hospital and private practice. They are largely used in illustrating the lectures on Medicine and Surgery. There are also wax and papier-marché models.

During the past few years numerous and extremely important additions have been made to the Medical Museum.

It is particularly rich in specimens of Aneurisms. In addition to containing a large number of the more common varieties of these formations, there are specimens of such rare conditions as Aneurism of the Hepatic and Superior Mesenteric Arteries, Traumatic Aneurism of the Vertebral, together with several of the cerebral and

pulmonary arteries. The most important collection probably in existence of hearts affected with "Malignant Endocarditis" is also found. The Faculty are indebted to Prof. Osler, late of this University, for this collection.

Specimens representing morbid alterations of the liver, and gall bladder, including Cirrhosis (a beautiful specimen of the Hypertrophic form, weighing 9½ lbs.), Hydatics, Cancer, Abscess Suppurative Hepatitis following Aneurism of the Hepatic Artery. This section also contains a large number of Biliary Calculi.

Intestines and Peritoneum.—Specimens illustrating the Morbid Anatomy of Typhoid Fever, Tropical Dysentery, Ulceration, and Malignant Disease.

Urinary Organs.—Besides the various forms of Bright's Disease, there are a number of specimens of Surgical and Cystic Kidneys, together with two specimens of Myelo-Sarcoma. A cabinet of Urinary Calculi, collected by Dr. Fenwick, is the property of the Museum.

Bones and Joints.—During the past two years the Faculty have made very extensive additions to the specimens illustrating diseases of the bones and joints, all of which are beautifully mounted.

Nervous System.—In this section are included a most beautiful collection of Brains, prepared by Dr. Osler after the method of Giacomini. Besides those illustrating pathological defect, there are normal specimens of the brains of horse, cow, dog, cat, pigeon, goose, lion, bear, seal, &c.

The Museum also contains a collection of human abnormalities, made by Dr. Shepherd during the time he was Demonstrator of Anatomy.

A collection of specimens of eye diseases, made by Dr. Buller, has been presented to the Museum.

---

§ X. LIBRARY.

The Library of the Medical Faculty now comprises upwards of ten thousand volumes, the largest special library connected with any medical school on this continent.

The standard text-books and works of reference, together with complete files of the leading periodicals, are on the shelves. Students may obtain books on making a deposit of $5, which is refunded on returning the volumes.

§ XI.—M'GILL MEDICAL SOCIETY.

This Society, composed of enregistered Students of the Faculty, meets once a week during the Summer Session, and fortnightly during the Winter, for the reading of papers and the discussion of medical subjects. It is presided over by a physician chosen by the members.

A reading room has been established in connection with the Society, in which the leading English and American Medical Journals are on file.

§ XII.—COST OF LIVING, &c.

This will, of course, vary with the tastes and habits of the Student, but the necessary expenses need not exceed those in smaller towns. Good board may be obtained from $15 to $20 per month. A list of boarding-houses is prepared annually by the Secretary of the University, and may be procured from the Janitor at the Medical College.

§ XIII.—HOSPITALS.

Montreal General Hospital.

The Montreal General Hospital is the most extensive clinical field in the Dominion. A much larger number of in-door and out-door patients receive treatment there than in any other Canadian Hospital. Last year's report shows that 2,347 Medical and Surgical cases were treated in the wards, and the great proportion of these were acute cases, as may be gathered from the fact that the average duration of residence was only 23.6 days.

The large number of out-door patients that are treated in the Hospital—averaging from eighty to one hundred daily—supply illustrations of most of the diseases of infants and children, of very many of the eye and skin, and of those chronic and ill-defined ailments which,

as they do not require admission to the wards of a hospital, would not otherwise come under the observation of the Student.

The large number of patients affected with diseases of the eye and ear, now attending the out-door department, will afford Students ample opportunity to become familiar with all the ordinary affections of those organs, and to make themselves proficient in the use of the ophthalmoscope, and it is hoped that every student will thus seek to gain a practical knowledge of this important branch of Medicine and Surgery. Operations are performed on the eye by Dr. Buller, after the out-door patients have been seen, and Students are invited to attend the same, and, as far as practicable, to keep such cases under observation so long as they remain in the Hospital.

There are now special departments in the Hospital for Gynæcology and Laryngology, presided over by Specialists in these branches. Students are thus enabled to acquire special technical knowledge under skilled direction. The plan of teaching practical gynæcology for the past five years with marked success has been the limitation of the number of Students to two or three, who in rotation assist at the examinations, and receive instruction in the diagnosis and treatment of uterine diseases, and the use of gynæcological instruments.

Clinical Clerks, in both medical and surgical wards, are appointed every three months, and each one during his term of service conducts, under the immediate directions of the Clinical Professors, the reporting of all cases in the ward allotted him. The holding of one of these offices is found to be of the greatest possible advantage to Students, as affording a true *practical* training for his future professional life. They will be awarded on application at the end of each Session to final Students of that year, in order of their standing in the primary examination.

Dressers are also appointed to the Surgical wards, and to the Out-door Department. For these appointments application is to be made to the Professor of Clinical Surgery, and to the Out-door attending Physicians and Surgeons.

The Operating Room (used also for a lecture room) is so constructed as to enable the Students to obtain a good view of the operations.

Montreal Dispenary.

ST. ANTOINE STREET.

Over 12,000 patients yearly are treated at this Institution. The cases are of great variety, comprising a large number of pulmonary affections and children's diseases. Minor operations are of daily occurrence, and excellent practice is afforded in the application of splints and bandages. The attending Physicians furnish Students with all possible facilities. The hours of attendance are from 12 to 2 daily.

The Montreal Maternity.

The Faculty have great pleasure in announcing that the Governors of the Montreal Maternity have greatly enlarged the building, and are contemplating still further additions and improvements this summer. It is constructed with all those modern improvements, which science and experience have demonstrated to be of value in this class of buildings. Students will in future, therefore, have much more abundant opportunities for becoming practically acquainted with Midwifery practice. The maternity will, as in the past, be under the direction of the Professor of Midwifery, and Students who have already attended one course of his lectures will be furnished with cases in rotation. Particular attention will be given to individual clinical instruction. Students are advised to attend this Institution as much as possible during the summer, when, since there are as many patients and not so many pupils as in winter, a larger proportion of cases falls to the share of each. The course of instruction now extends over one year instead of six months as formerly.

---

§ XIV.—STUDENTS' APPOINTMENTS.

General Hospital—Three Resident Medical Officers.
Clinical Clerk, Gynæcology,
" " Laryngology.
" " Diseases of Children.
" " Dermatology.
" " Diseases of Nervous System.

University Maternity—Two Resident Medical Officers.
Out-door Dressers.
Dressers in Eye and Ear Department.
Surgical Dressers (In-door).
Medical Clinical Clerks.
Post-mortem Clerks.
Students Demonstrators of Anatomy, 4 third-year Students.
Prosectors to Chair of Anatomy, 2.
Assistants in Practical Histology Course, 2.
Assistants in Practical Physiology Course, 4.
Assistants in Practical Chemistry, 2.

---

§ XV. RULES FOR STUDENTS.

1. In the case of disorderly conduct, any Student may, at the discretion of the Professor, be required to leave the Class-room. Persistence in any offence against discipline after admonition by the Professor shall be reported to the Dean of the Faculty. The Dean may, at his discretion, reprimand the Student, or refer the matter to the Faculty at its next meeting, and may in the interval suspend from classes.

2. Absence from any number of lectures can only be excused by necessity or duty, of which proof must be given, when called for, to the Faculty. The number of times of absence, from necessity or duty, that shall disqualify for the keeping of a Session, shall in each case be determined by the Faculty.

3. While in the College, Students are expected to conduct themselves in the same orderly manner as in the Class-room.

4. When Students are brought before the Faculty under the above rules, the Faculty may reprimand, impose fines, disqualify from competing for prizes and honors, suspend from Classes, or report to the Corporation for expulsion.

McGill University.—Faculty of Medicine.

TIME TABLE—FIRST AND SECOND YEARS, 1888-89.

A.M.	Monday.	Tuesday.	Wednesday.	Thursday.	Friday.	Saturday.
9	Anatomy Examination.	Anatomy.	Anatomy.	Anatomy.	Anatomy.	Physiology, 2nd Year.
10	* Practical Chemistry. 2nd Year. till 12 o'clock.	Practical Chemistry, H. Botany, 1st Year.	Practical Chemistry. 2nd Year.	Practical Chemistry. Botany, 1st Year.	Practical Chemistry. 2nd Year.	Practical Chemistry. Practical Physiology. Histology Demonstration.
11	Out-Patients, Montreal Gen'l Hospital.	Out-Patients, Montreal Gen'l Hospital. Zoology.	Out-Patients, Montreal Gen'l Hospital.	Out-Patients, Montreal Gen'l Hospital.	Out-Patients, Montreal Gen'l Hospital. Zoology.	Out-Patients, Montreal Gen'l Hospital.
P.M. 2	Physiology Examination, 2nd Year.	Physiology. 2nd Year.	Physiology. 2nd Year.	Physiology, 1st Year.	Physiology, 1st and 2nd Years.	
3	Chemistry. Examination.	Chemistry.	Chemistry.	Chemistry.	Chemistry.	
4	Therapeutics Examination. Physiology, 1st Year.	Therapeutics. Physiology, 1st Year.	Therapeutics. Physiology, 1st Year.	Therapeutics.	Therapeutics. Histology Lectures, 1st Year.	
4 to 6		Practical Histology.		Practical Histology.		
A.M. 10 to 12	Practical Anatomy.	Practical Anatomy.	Practical Anatomy.	Practical Anatomy.	Practical Anatomy.	Practical Anatomy.

N.B.—The Demonstrator's Hours in the Dissecting Room from 10–12 a.m., and from 8–10 p.m. * Until Christmas only.

McGill University.—Faculty of Medicine.

TIME TABLE—THIRD AND FOURTH YEARS, 1888-89.

A.M.	Monday.	Tuesday.	Wednesday.	Thursday.	Friday.	Saturday.
9	Midwifery.	Gynæcology.	Midwifery.	Gynæcology.	Midwifery.	
10	Surgery. Examination.	Surgery.	Surgery.	Surgery.	Surgery.	Morbid Anatomy. Demonstrations.
11	Practice of Medicine. Examination.	Practice of Medicine.	Practice of Medicine.	Practice of Medicine.	Practice of Medicine.	
P.M. 1–2.30	Medical Clinic, 4th Year. Surgical Clinic, 3rd Year.	Surgical Clinic, 4th Year. Medical Clinic, 3rd Year.	Medical Clinic, 4th Year. Surgical Clinic, 3rd Year.	Surgical Clinic, 4th Year. Medical Clinic, 3rd Year.	Medical Clinic, 4th Year. Surgical Clinic, 3rd Year.	Surgical Clinic, 4th Year. Medical Clinic, 3rd Year.
1		Clinic on Diseases of Children.		Clinic on Diseases of Children.		Clinic on Diseases of Children.
2					Skin Clinic.	
2.30			Neurological Clinic.			
2.30	Ophthalmic Clinic.		Ophthalmic Clinic.		Ophthalmic Clinic.	
4	Therapeutics Examination.	Therapeutics.	Therapeutics.	Therapeutics.	Therapeutics.	
4	Gynæcological Clinic.	General Pathology.	Gynæcological Clinic.	Lecture on Ophthalmology.	Gynæcological Clinic.	

Autopsies are performed at the General Hospital between 12 and 2 p.m.

Faculty of Law.

THE PRINCIPAL (Ex-officio).

Professors :—LAFLAMME.*
TRENHOLME.
WURTELE.*
RAINVILLE.*
ARCHIBALD.

Professors :—LAREAU.
HUTCHINSON.
ROBIDOUX.
DAVIDSON.
MCGOUN.

Lecturer :—HART.

Dean of Faculty.—Professor N. W. TRENHOLME, M.A., D.C.L.

Registrar of the Faculty.—ARCH. MCGOUN, B.A., B.C.L.

Corporation Examiners for Degrees.—Professors N. W. TRENHOLME, M.A., D.C.L., and EDMOND LAREAU, D.C.L.

Matriculation Examiners of the Faculty.—Professors J. S. ARCHIBALD, M.A., D.C.L., and EDMOND LAREAU, D.C.L.

The Classes in Law will begin with an opening Lecture on Monday the first of October, 1888; and will extend to 12th April, 1889. The Examinations will be held in the William Molson's Hall, McGill College building, at the close of the Session, and beginning on the 16th April, 1889.

The complete course of study in this Faculty extends over three years; but it may be shortened to two years, when the Student matriculates in the third year of his indentures.

Students who avail themselves of the privilege of attending two years only, will, nevertheless, be required to pass an examination in the subjects comprised in the three years' course.

Matriculated Students who do not take the whole course are classed as Partial Students and are not entitled to proceed to the Degree of B.C.L.

---

* Emeritus.

Occasional Students will be received without matriculation for attendance on any particular series of Lectures.

Students who have completed their course of three years,—or of two years, if they have commenced in the third year of their indentures,—and have passed a satisfactory examination, will be entitled, upon the certificate and recommendation of the Faculty, to the Degree of Bachelor of Civil Law.

COURSE OF STUDY FOR 1888-89.

FIRST YEAR.

Legal History ..... Professor LAREAU.

Civil Law :

Persons, Property, Ownership ..... Professor ROBIDOUX.

Roman Law :

History of Roman Law, Institutes of Justinian, Bk. I, Maine, chapters I. to IV ..... Professor HUTCHINSON.

Civil and Commercial Law :

Commercial agency, Partnership, Joint Stock Companies ..... Professor DAVIDSON.

Civil Procedure :

Jurisdiction of Civil Courts, General Rules of Pleading, Code of Procedure, Arts. 1 to 135 ..... Professor MCGOUN.

Constitutional Law, Criminal Procedure, Election Law ..... Professor ARCHIBALD.

Notarial Course :

Theory and Practice of Notarial Deeds and Proceedings ..... Lecturer HART.

SECOND AND THIRD YEARS.

Legal Bibliography :

Civil Law :

Privileges and Hypothecs, Prescriptions, Imprisonment in Civil Cases ..... Professor LAREAU.

Civil Law:

Usufruct, Use and Habitation ..... } Professor ROBIDOUX.
Real Servitudes ..... }
Emphytensis ..... }

Commercial Sales:
International Law (Public and Private) ..... } Professor TRENHOLME.

Roman Law:

Institutes of Justinian, B. II. and B. III. to Title 14. } Professor HUTCHINSON.
Maine, Chapters V. to VIII ..... }

Commercial Law:

Merchant Shipping and Affreightment ..... Professor DAVIDSON.

Civil Procedure:

From Article 136 to Article 762 ..... Professor MCGOUN.

Criminal Procedure ..... } Professor ARCHIBALD.
Constitutional Law ..... }
Election Law ..... }

Notarial Course:

Theory and Practice of Notarial Deeds and Proceedings ..... } Lecturer HART.

FACULTY REGULATIONS.

1. Any person desirous of becoming a Matriculated Student shall apply to the Dean of the Faculty for examination and entry in the Register of Matriculation, and shall procure a ticket of Matriculation and tickets of admission to the Lectures for each Session of the Course. Students are requested to call on the Registrar, who will furnish them with the necessary forms.

2. Candidates for Matriculation shall pass an examination, satisfactory to the Faculty of Law, in Latin, French, English, Mathematics, and Ancient and Modern History, and the books upon which such examination shall be had shall be from time to time fixed by the Faculty.

II. MATRICULATION IN THE FACULTY OF LAW.

The books at present prescribed are the following:

Latin.—Virgil, Æneid, Book I.; Cicero, Orations I. and II. against Catiline; Latin Grammar.

French.—De Fivas' "Grammaire des Grammaires;" *Molière, "Le Bourgeois Gentilhomme;" †Translation into French of Macaulay's Essay on Frederick the Great.

Exercises in composition and grammatical analysis, in English and French.

Mathematics.—Arithmetic ; Algebra to the end of simple equations ; Euclid, Books I., II., III.

History.—White's Outline of Universal History (or any equivalent manual), *Green's Short History of the English People ; Miles' School History of Canada ; † Duruy, Histoire de France.

Literature.—*Collier's Biographical History of English Literature ; † Laharpe, Cours de Litérature ; † Lefranc, Cours de Litérature.

Rhetoric.—Whately's Rhetoric ; Blair's Lectures (small edition).

Philosophy.—*Whately's Logic ; † Logique de Port Royal; † Cousin, Histoires de la Philosophie ; * Stewart's Outline of Moral Philosophy.

N.B.—The works mentioned above preceded by an asterisk are for English students only. Those preceded by a cross are for French Students only. The remainder are for both English and French.

3. Students in Law shall be known as of the First, Second and Third Years, and shall be so graded by the Faculty. In each year, Students shall take the studies fixed for that year, and those only, unless by special permission of the Faculty.

4. The Register of Matriculation shall be closed on the 1st of November in each year, and return thereof shall be immediately made by the Dean to the Registrar of the University. Candidates applying thereafter may be admitted on a special examination to be determined by the Faculty; and, if admitted, their names shall be returned in a supplementary list to the Registrar.

5. Persons desirous of entering as Occasional Students shall apply to the Dean of the Faculty for admission as such Students, and shall obtain a ticket or tickets for the class or classes they desire to attend.

6. Students who have attended Collegiate courses of study in other Universities, for a number of terms or sessions, may be admitted, on the production of certificates, to a like standing in this University, after examination by the Faculty.

7. All Students shall be subject to the following regulations for attendance and conduct :—

(1) A class-book shall be kept by each Professor and Lecturer, in which the presence or absence of Students shall be carefully noted ; and the said class book shall be submitted to the Faculty at a meeting to be held between the close of the lectures and the commencement of the examinations ; and the Faculty shall, after examination of such class-book, decide which students shall be deemed to have been sufficiently regular in their attendance to entitle them to proceed to the examination in the respective classes.

(2) Punctual attendance on all the classes proper to his year is required of each Student. Professors will note the attendance immediately on the commencement of their lectures, and will omit the names of Students entering thereafter, unless satisfactory reasons are assigned. Absence or tardiness, without sufficient excuse, or inattention or disorder in the Class room, if persisted in after admonition by the Professor, will be reported to the Dean of the Faculty, who may reprimand the Student or report to the Faculty, as he may decide. While in the building, or going to or from it, Students are expected to conduct themselves in the same orderly manner as in the Class rooms. Any Professor observing improper conduct in the Class-rooms, or elsewhere in the building, will admonish the student; and, if necessary, report him to the Dean.

(3) When Students are reported to the Faculty under the above rules, the Faculty may reprimand, report to parents or guardians, disqualify from competing for prizes or honours, suspend from classes, or report to the Corporation for expulsion.

(4) Any Student injuring the furniture or building will be required to repair the same at his own expense, and will, in addition, be subject to such penalty as the Faculty may see fit to impose.

(5) The number of times of absence, from necessity or duty, that shall disqualify for the keeping of a Session, shall in each case be determined by the Faculty.

(6) All cases of discipline involving the interests of more than one Faculty, or of the University generally, shall be reported to the Principal, or, in his absence, to the Vice-Principal.

8. The College year shall be divided into two terms, the first extending to the Christmas vacation, and the second from the expiration of the Christmas vacation to the 12th of April following.

Four Professors shall deliver their courses of lectures during the first term, and three during the second term in each year. Each Professor shall lecture daily during his course, and each lecture shall be of one hour's duration; but the Professors shall have the right to substitute an examination for any such lecture.

9. At the end of each term there shall be a general examination of all the classes, under the superintendence of the Professors, and of such other examiners as may be appointed by the Corporation; which examination shall be conducted by means of printed questions, answered by the students in writing in the presence of the Examiners. The results shall be reported as early as possible to the Faculty.

After the examinations at the close of the second term, the Faculty shall decide the general standing of the students, taking into consideration the examinations of both terms, both of which examinations shall be considered the Sessional or Final Examinations for the college year, as the case may be.

10. No Student shall be considered as having kept a Session unless he shall have attended regularly all the courses of Lectures, and shall have passep the Sessional Examinations to the satisfaction of the Faculty in all the classes of his year.

11. The Faculty shall have the power, upon special and sufficient cause shown, to grant a dispensation to any Student from attendance on any particular Course or Courses of Lectures, but no distinction shall, in consequence, be made between the Examinations of such Students and those of the Students regularly attending Lectures. No Student shall pass for the degree of B.C.L. unless he has prepared a Thesis, either in French or English, which shall have been approved by the Faculty.

12. The subject of such Thesis shall be left to the choice of the Student, but it must fall within the range of study of the Faculty, and shall not exceed twenty pages of thirty lines each. Each Student shall, on or before the first day of March, forward such Thesis to the Registrar of the Faculty, marked with the *nom de plume* which he shall adopt, and accompanied with a sealed envelope, bearing the same *nom de plume* on it, and containing inside his name and the subject of his Thesis, and the envelope shall be opened in presence of the Faculty after the final decision shall be given on the respective merits of the several Thesis.

13. The Elizabeth Torrance Gold Medal, in the Faculty of Law, shall be awarded to the Student who, being of the Graduating Class, having passed the Final Examinations, and having prepared a Thesis of sufficient merit in the estimation of the Faculty to entitle him to compete, shall take the highest marks in a special Examination for the medal, which examination shall include the subject of Roman Law.

14. Every Candidate, before receiving the Degree of B.C.L., shall make the following declaration :

Ego A. B. polliceor, me, pro viribus meis, studiosum fore communis hujus Universitatis boni, operamque daturum ut decus ejus ac dignitatem amplificem, et officiis omnibus ad Baccalaureatus in Jure Civili gradum pertinentibus fungar.

15. The fees in this Faculty are as follows :

Matriculation Fee	$ 5 00
Sessional Fee by Ordinary Students	36 00
Sessional Fee by Occasional or Partial Students, for each course	5 00
Graduation Fee, including Diploma and Case	10 00
Additional Fee for Notarial Students	10 00

Matriculation and Sessional Fees must be paid on or before Nov. 1st, and if not so paid the name of the Student shall be removed from the books, but may be re-entered by consent of the Faculty, and on payment of a fine of not less than $3 Students already on the books of the University shall not be required to pay any Matriculation Fee.

16. The Course of Lectures upon the Theory and Practice of Notarial Deeds and Proceedings is optional to candidates for the profession of law, but is compulsory upon candidates for the Notarial profession ; the latter may omit the subject of Civil Procedure.

17. Notarial students shall rank for general standing upon their examination in the notarial class, and failure to pass such examination shall have the same effect as failure in any other compulsory subject.

18. Occasional students may be admitted into said class on such terms as shall be arranged by the Faculty.

19. Every Candidate for the Degree of D.C.L. in course, under Chap. VIII., Section 4, of the Statutes of the University, shall be required to pass within four years from his graduation as B.C.L. such examination as shall be prescribed by the regulations of the Faculty of Law ; unless he shall have graduated as a B.A. of this University, either in Course or *ad eundem*. And not less than two months before proceeding to the Degree of D.C.L., the Candidate shall deliver to the Faculty of Law twenty-five printed copies of a Thesis or Treatise upon a subject selected or approved by the Faculty ; such Thesis to contain not less than twenty-five octavo pages of printed matter, and possessing such degree of literary and scientific merit as shall, in the opinion of the Faculty, justify them in recommend ing him for that Degree. And in addition to the foregoing qualifications, the Candidate shall pay to the Secretary of the Faculty annually during term, for the retention of his name on the Books of the Faculty, during the said period of twelve years, a fee of two dollars, to be added to the Library Fund of the Faculty.

Except as regards the Thesis, this regulation applies only to those who have taken the Degree of B.C.L. subsequently to October, 1873. The examination under the above rule is as follows :

(1) *International Law :—*

Phillimore : Wharton, Conflict of Law ; Fœlix, Droit International Privé.

(2) *Roman Law :—*

Gaii Commentarii, IV. ; Pauli Sententiæ ; Pomponii Fragmentum de origine juris, D. 1, 2 ; Novellæ Justiniani, cxxviii cxxvii ; Ortolan, Institutes de Justinien, Vol. i. ; Mommsen's History of Rome.

(3) *Constitutional Law :—*

Hallam, Constitutional History of England ; May, Constitutional History of England ; Mill, Representative Government ; The British North America Act, and cases thereunder.

University School Examinations.

1889.

UNDER THE SUPERINTENDENCE OF McGILL UNIVERSITY, MONTREAL, AND THE UNIVERSITY OF BISHOP'S COLLEGE, LENNOXVILLE, AND SANCTIONED BY THE PROTESTANT COMMITTEE OF THE COUNCIL OF PUBLIC INSTRUCTION.

FOR CERTIFICATES OF THE UNIVERSITIES AND THE TITLE OF ASSOCIATE IN ARTS.

These Examinations are held in Montreal and at Lennoxville; and local centres may be appointed elsewhere on application to the Principal of either University, accompanied with the names of satisfactory Deputy Examiners, and guarantee for the payment of necessary expenses.

The Examinations are open to Boys or Girls, from any Canadian School.

SUBJECTS OF EXAMINATION.

I. PRELIMINARY SUBJECTS.

English Reading	30	*Marks.*
Writing	30	do
English Dictation	50	do
English Grammar	50	do
Arithmetic (all the ordinary rules, including square root)	100	do
Geography (acquaintance with the maps of each of the four continents, and of British North America)	50	do
British History and *Canadian History*	50	do

The Candidates will also be examined in the Gospels, unless objection be made thereto by their parents or guardians, and creditable answering in the same will be mentioned in the Certificate.

II. OPTIONAL SUBJECTS.

Section I. Languages.

Latin :—

Cæsar.—Bell. Gall. Bk. I.
Virgil.—Æneid, Bk. I.
Cicero.—In Catilinam, Oratt. I. and II.

} 150 marks.

Greek :—

Xenophon.—Anabasis Bk. I.
Homer.—Iliad, Bk. IV. } 150 marks.

French :—

Grammar, Dictation.
Darey's Lectures Françaises (selected extracts).
Re-translation, English into French. } 120 do

German :—

Grammar.
Adler's Reader, Sections I. and II.
Translation from German into English. } 120 do

Section 2. Mathematics, Natural Philosophy, &c.

Geometry :—

Euclid, I., II., III. ..... 150 do

Algebra :—

Elementary Rules, Involution, Evolution, Fractions, Simple Equations. } 150 do

Plane Trigonometry.

(As in Hamblin Smith, pp. 1-100, omitting Ch. XI.). 100 do

Natural Philosophy.

Mechanics and Hydrostatics (as in any ordinary School Text Book). } 100 do

Geometrical and Freehand Drawing. ..... 100 do

Geometrical.—Vere Foster R^1, R^2, R^3, problems 119 to 129.

Freehand—Rules of Perspective. Drawing from the object.

Section 3. English.

The English Language.

Mason's Grammar, including derivation and omitting appendix.
Trench's Study of Words. } 120 do

English Literature.

English Literature, Primer by S. A. Brooke.
Shakespeare, Julius Cæsar.
Scott's Lady of the Lake. } 120 do

History.—(As in Primers of Greece and Rome, and either of the following, namely : Collier's great Events, or MacLear's Old and New Testament History). } 100 do

Geography.—Physical, Political and Commercial (as in Calkin's Advanced) ..... 100 do

Section 4. Natural Science, &c.

Zoology (as in Nicholson's Introductory Text-Book)	100	marks.
Botany (as in Gray's "How Plants Grow")	100	do
Geology (as in Dana's Text Book)	100	do
Chemistry (as in Remsen's Elements of Chemistry, pp. 1 to 160)	100	do
Physiology and Hygiene	100	do

GENERAL REGULATIONS.

1. Candidates will not be considered as having passed in any subject, unless they have obtained at least *one-third* (and, in the case of Reading and Dictation, *two-thirds*) of the total number of marks obtainable in that subject.

2. Every Candidate for the Certificate of Associate in Arts, or for the Junior Certificate, must pass in all the Preliminary Subjects.

3. Every Candidate for the Certificate of Associate in Arts must also pass in the Optional Subjects contained in one of the three following groups:

First.—(*a*) Two Subjects of Section 1, one of them being Latin or Greek.
(*b*) Geometry or Algebra of Section 2.
(*c*) Two of the nine Subjects of Sections 3 and 4.

Second.—(*a*) French and German of Section 1.
(*b*) Geometry or Algebra of Section 2.
(*c*) Two Subjects of Section 3.
(*d*) One Subject of Section 4.

Third.—(*a*) One Subject of Section 1.
(*b*) Two Subjects of Section 2.
(*c*) Three of the nine Subjects of Sections 3 and 4.

4. Candidates for Junior Certificates must pass in the following:
(*a*) One Subject of Section 1.
(*b*) One Subject of Section 2.
(*c*) One of the nine Subjects of Sections 3 and 4.

5. The total number of Marks gained by every Candidate, in both the preliminary Subjects (except Reading) and Optional Subjects, shall be added up, and the Candidates arranged in a printed list, at the close of the Examination; those who are under 18 years of age on the first day of the examination in the order of these totals; those over 18 years of age alphabetically. No marks in any subject shall be counted, unless the Candidate has gained at least the minimum number of Marks required for passing in that subject. The marks in not more than three subjects of section 1, three subjects of section 2, and three subjects selected

from sections 3 and 4, will be counted. Candidates taking one classical and one modern language may, instead of a third language, take an additional subject of section 4, with Geometrical or Freehand Drawing (150 marks in the aggregate). Candidates who take two modern languages may take an additional subject of section 4, with drawing as above, to be reckoned at 180 marks. Candidates taking one subject only of section 1 may take four subjects selected from sections 3 and 4.

6. Candidates who obtain at least *two-thirds* of the marks in any Optional Subject will be entitled to a Certificate of creditable answering in that Subject, provided they satisfy the conditions for either Associate in Arts or Junior Certificate.

7. Associates in Arts who have passed in Latin, Greek,* Algebra and Geometry, may, without further examination, enter the Faculties of Arts of the two Universities. Those who have passed in Algebra and Geometry may enter the Faculty of Applied Science of McGill University.

8. Candidates who fail, or who may be prevented by illness from completing their examinations, may come up at the next examination without extra fee.

9. The Head Master or Mistress of each school must certify to the character and ages of the pupils sent up for examination.

10. The examinations will begin on Monday, June 3rd, at 9 a.m.

11. List of the names, ages, and Optional Subjects to be taken by the candidates, together with the fee of $4 for each Candidate, must be transmitted to the Secretary of McGill University on or before May 1st. (Blank forms and copies of the Regulations will be furnished on application.)

The Regulations of the Protestant Committee of the Council of Public Instructor with reference to these examinations may be obtained on application to Rev. E. I. Rexford, Secretary, Department of Public Instruction, Quebec.

Extracts from Darey's Lectures Françaises, for the examination of 1889.

Extracts beginning on pp. 10, 13, 15, 20, 32, 33, 37, 42, 47, 51, 56, 63, 68, 74, 76, 85, 87, 92, 94, 99, 103, 110, 118, 125, 129, 133, 144, 149, 151, 156, 158, 162, 166, 169, 176, 179, 182, 196, 215.

---

* For women entering McGill, Greek will not be required.

Passed the University Examinations.

SESSION 1887-8.

FACULTY OF LAW.

PASSED FOR THE DEGREE OF B.C.L.

John M. Ferguson, St. Anicet, Q
Robert A. Dunton, Montreal, Q
Henry Fry, Montreal, Q
Hanburry A. Budden, B.A., Montreal, Q
John F. Reddy, Montreal, Q

FACULTY OF MEDICINE.

PASSED THE PRIMARY EXAMINATION.

(Arranged Alphabetically.)

Addy, G. A. B., St. John, N.B.
Aylen, W. W., Aylmer, Q.
Bissett, C. P., River Bourgeois, N.S.
Bowes, E. J., Ottawa, O.
Broderick, E. J., Fredericton, N.B.
Burritt, C. H., B.A., Mitchell, O.
Clarke, J. W., Tatamagouche, N.S.
Clune, P. J., Warkworth, O.
Coleman, A. H., Belleville, O.
Corbin, F. G., Bedford, N.S.
Curtis, I. B., Hartland, N.B.
Evans, D. J., Montreal, Q.
Ellis, T. H., Pembroke, O.
Esson, A. C., Halifax, N.S.
Esson, F. G., Halifax, N.S.
Haldimand, A. W., Montreal, Q.
Hamilton, H. D., Montreal, Q.
Hayes, J., B.A., Nelson, N.B.
Inksetter, W. E., Copetown, O.
Irwin, W. T., Pembroke, O.
Jento, C. P., Brockville, O.
Kerr, N., Holyrood, O.
Lang, M. W., St. Mary's, O.
Liddell, G. L., Cornwall, O.
Low, D., Glen Buel, O.
Main, C. G., Canterbury, N.B.
Murray, M. W., Beechwood, O.
Morris, O., Pembroke, O.
McEwen, H., Carleton, O.
McDonald, M. S., Scotchtown, O.
McKee, G. L., Coaticook, Q.
McKinnon, G. W., Sunnyside, P.E.I.
McKechnie, R. E., Winnipeg, Man.
McPhail, J. A., Orwell, P.E.I.
McLellan, A. C., Indian River, P.E.I.
McManus, H. D., Fredericton, N.B.
Morphy, A. G., B.A., London, O.
Noble, C. T., Sutton, O.
Robertson, W., Chesterfield, O.
Reid, T. J., Winnipeg, Man.
Ross, J., Halifax, N.S.
Ross, H. R., Quebec, Q.
Smith, W. D., Plantagenet, O.
Telfer, W. J., Burgoyne, O.
Thompson, F. E., Quebec, Q.
White, D. D., Montreal, Q.
Wilson, W. A., Derby, N.B.
Wheeler, C. L., B.A., Montreal, Q.
Yorkston, F. S., Truro, N.S.

PASSED FOR THE DEGREE OF M.D., C.M.

(Arranged Alphabetically.)

Beer, D. C., Summerfield, Ill.
Bell, J. H., B.A., Montreal, Q.
Berry, R. P., Lindsay, O.
Bradley, W. J., B.A., Ottawa, O.
Cameron, J. J., Lancaster, O.
Carter, E. H., Picton, O.
Castleman, A. L., East Williamsburg, O.
Chalmers, W. W., B.A., Huntingdon, Q.
Clouston, J. R., Maple Hill, Q.
Conroy, C. P., Martintown, O.

Desmond, F. J., Newcastle, N.B.
Dewar, C. P., Ottawa, O.
Ferguson, W. D. T, Cumberland, O.
Fritz, H. D., B A., St. John, N.B.
Goodwin, W. W, Baie Verte, N.B.
Gunne, N. D., Seaforth, O.
Haentschel, C. W., Pembroke, O.
Hewitt, J., Quebec, Q.
Hoare, C. W, Strathroy, O.
Haldimand, H. W., Montreal, Q.
Hopkins, H. J., Cookshire, Q.
Hubbard, O. H., Gilsam, N.H.
Kennedy, J. H., Lindsay, O.
Kenney, F. L., B.A., St. John, N.B.
Kincaid, C. M., Clarenceville, Q.
Kirkpatrick, E. A., Kentville, N.S.
Lang, W. M., St. Mary's, O.
Metcalfe, F. T., Buffalo, N.Y.
Moffatt, R. D., West Winchester, O.
Morrow, C., Russell, O.
McDonell, A. E. J., B.A., Morrisburg, O.
McDougall, D. S, Russell, O.
McCarthy, J. G., Sorel, Q.
McFarlane, M. A, Arnprior, O.
McKinnon, G. W., Sunnyside, P.E.I.
McLennan, D., Dunvegan, O.
McMartin, D. R. Martintown, O.
Orr, A. E., Cookshire, Q.
Orr, J. E., Mount Elgin, O.
Park, P. C., Durham, O.
Pearman, H. V., Halifax, N.S.
Potts, J. Mc., Belleville, O.
Quirk, E. L., Aylmer, Q.
Robertson, A. G., Iroquois, O.
Stewart, A. D., Arundel, Q.
Stewart, W. G., B.A., Arundel, Q.
Springle, J. A., Montreal, Q.
Thompson, J. H., Gananoque, Q.
Weagant, A. A., Hosaic, O.
Westley, R. A., Lancaster, O.
Wetmore, F. H., Bloomfield, N.B.
Woodruff, T. A., St. Catharines, O.
Wylde, C. F., Halifax, N.S.
Young, H. E., B.A., Napanee, O.

FACULTY OF ARTS.

PASSED FOR THE DEGREE OF B.A.

In Honours.

(Alphabetically arranged.)

First Rank.—DAY, JOHN L.
EVANS, C. BLANCHE B.
GILES, WILLIAM J.
HUNTER, GEORGINA.
LEROSSIGNOL, JAMES E.
MARTIN, CHARLES F.
MCFEE, DONALDA.
PEDLEY, HILTON.
RITCHIE, OCTAVIA G.

Second Rank.—LINDSAY, NORMAN.

Ordinary.

(In order of Merit.)

McGill College.

Class I.—MACALLUM, FREDERICK W.
BRYAN, ANDREW C.

Class II.—Mason, Horace E. C.
Naismith, Peter L.
Massé, Arthur E.
{ Howitt, William.
{ McPhail, John A.
Cross, Eliza C.
Palmer, Jane V.
Larkin, Frederick H.

Class III.—Murray, Alice.
Murphy, Martha.
Bryson, Alfred P.
Thurlow, Harold M.
England, George P.
Sweeny, George R.
Aeger.—Morison, John A.

BACHELORS OF ARTS PROCEEDING TO THE DEGREE OF M.A. IN COURSE.

Macfee, Kutusoff N., B.A.
Macfarlane, James, B.A.
Thompson, G. J., B.A.

ADMITTED TO THE DEGREE OF LL.D., "*Honoris Causâ.*"

Heneker, R. W., D. C. L.—Chancellor of the University of Bishop's College, Lennoxville.

Anderson, Alexander.—Principal of Prince of Wales College, Charlottetown, P. E. I.

Fream, William, B. S. C. (London.)—Professor of Natural History in the Royal Agricultural College, Cirencester, England.

PASSED THE INTERMEDIATE EXAMINATION.

McGill College.

Class I.—Daley, James T.
Williams, Annie.
Derick, Carrie M.
Nicholls, Albert G.
McDougall, Robert.
Abbott, Maude E.
Fraser, Daniel J.
Sutherland, Hugh C.
Robertson, Andrew A.

Class II.—Scott, Sarah B.
Mack, Silas W.
Botterell, H. Inez R.
Colclough, William T.
Davidson, Peers.
Botterell, Jeanie T.
Tolmie, Alexander.
Hall, Alexander R.
Elliott James A.
McGregor, A.
Tory, H.
Richardson, P. L.

Class III.—Mathewson, George H.
Macfarlane, Mira.
McDuffee, Lewis P.
McVicar, Donald.
Hall, Richard S.
Walsh, Alexander W.
Kinghorn, Hugh M.
Trenholme, Edward C.
Cameron, J. Alexander.
Fry, Frederick M.
Ross, Joseph J.
Finch, C. W.

Morrin College

Class I.—Brodie, Charles E.
Class II.—Hunter, Alexander.
Class III.—Anderson, Duncan P.
Craig, Hugh.
DesBrisay, Charles.
McCullough Robert.

St. Francis College.

Class I.—None.
Class II.—Farnsworth, R. H.
Class III.—Elliott, E. A.
Jones, Arthur.
Reid, W. D.
Dresser, J.

FACULTY OF APPLIED SCIENCE.

PASSED FOR THE DEGREE.

Civil Engineering (*Advanced Course.*)

IN ORDER OF MERIT.

Edgar Sydney Montgomery Lovelace, Marshall Willard Hopkins.

Civil Engineering (*Ordinary Course.*)

IN ORDER OF MERIT.

Edgar Sydney Montgomery Lovelace, Marshall Willard Hopkin
Alfred Joseph Tremblay.

Mechanical Engineering (*Advanced Course.*)

Arthur Lenox Drummond.

Mechanical Engineering (*Ordinary Course.*)

IN ORDER OF MERIT.

Arthur Lenox Drummond, Arthur Edward Childs, Robert Forrest Ogilvy,
Aubrey George Eneas.

Mining Engineering (*Ordinary Course.*)

IN ORDER OF MERIT.

Charles Herbert Macnutt, François Xavier A. Roy.

Practical Chemistry (*Ordinary Course.*)

IN ORDER OF MERIT.

William Joseph Hamilton, Charles Laughlin Walters.

Scholarships and Exhibitions.

SESSION 1887-88.

FACULTY OF ARTS.

I. SCHOLARSHIPS (Tenable for two years).

Year of Award.	Names of Scholars.	Subject of Examination.	Annual Value	Founder or Donor.
1886	Le Rossignol, Jas. E.	Nat. Science.	$125	W. C. McDonald.
1886	Day, John L.	Class.& Mod.Lang	125	W. C. McDonald.
1886	Bryan, Andrew.	Class.& Mod.Lang	125	Barbara Scott.
1887	Gibson, W. D.	Nat. Science.	125	W. C. McDonald.
1887	Truell, H. V.	Class.& Mod.Lang	125	W. C. McDonald.
1887	Deeks, W. E.	Class.& Mod.Lang	120	Chas. Alexander.

II. EXHIBITIONS (Tenable for one year).

NAMES OF EXHIBITIONERS.	Academic Year.	Annual Value	Founder or Donor.
Giles, W. J.	Fourth	$125	W. C. McDonald.
MacDougall, Robert.	Second	125	W. C. McDonald.
Robertson, A. A.	"	125	W. C. McDonald.
Nicholls, A. G.	"	125	George Hague.
McGregor, John M.	First	125	W. C. McDonald.
Le Rossignol, W. J.	"	125	W. C. McDonald.

Prizes, Honours and Standing.

SESSION 1887-88.

FACULTY OF LAW.

GRADUATING CLASS.

First Rank Honors and Elizabeth Torrance Gold Medal.—JOHN M. FERGUSON.

First Rank Honors and Second Prize for General Proficiency.—ROBERT A. DUNTON.

First Rank Honors, Prize for Thesis.—HENRY FRY.

Standing in Several Classes.

INTERNATIONAL LAW.—Late Professor KERR, now held by Professor TRENHOLME.

First, DUNTON and FERGUSON, equal.
Second, FRY and REDDY, equal.

ROMAN LAW.—Lately Professor TRENHOLME, now Professor HUTCHISON.

First, FERGUSON.
Second, DUNTON.

MUNICIPAL LAW.—Professor ARCHIBALD.

First, FERGUSON.
Second, DUNTON.

LEGAL HISTORY.—Professor LAREAU.

First, FERGUSON.
Second, DUNTON and REDDY, equal.

CIVIL LAW.—Professor ROBIDOUX.

First, FERGUSON and DUNTON, equal.
Second, BUDDEN.

COMMERCIAL LAW.—Professor DAVIDSON.

First, DUNTON and FERGUSON, equal.
Second, FRY.

CIVIL PROCEDURE.—Professor HUTCHISON.

First, FERGUSON and DUNTON, equal.
Second, FRY and BUDDEN, equal.

SECOND YEAR.

First Rank Honors and First Prize for General Proficiency.—RONZO H. CLARK.

First Rank Honors and Second Prize.—FRANCIS TOPP.

Second Rank Honors.—CHARLES A. BARNARD.

Passed the Sessional Examination.

RONZO H. CLARK.
FRANCIS TOPP.
CHARLES A. BARNARD.

Standing in the Several Classes.

INTERNATIONAL LAW.—Lately Professor KERR, now Professor TRENHOLME.

First, CLARK.
Second, TOPP.

ROMAN LAW.—Professor HUTCHISON.

First, TOPP.
Second, CLARK.

MUNICIPAL LAW.—Professor ARCHIBALD.

First, TOPP and CLARK, equal.
Second, BARNARD.

LEGAL HISTORY.—Professor LAREAU.

First, CLARK.
Second, BARNARD and TOPP, equal.

CIVIL PROCEDURE.—

First, CLARK and TOPP, equal.
Second, BARNARD.

CIVIL LAW.—Professor ROBIDOUX.

First, CLARK.
Second, BARNARD.

COMMERCIAL LAW.—Professor DAVIDSON.

First, CLARK.
Second, TOPP.

FIRST YEAR.

Second Rank Honors and First Prize.—W. A. KNEELAND.

Second Honors and Second Prize.—D. H. GIROUARD.

Passed the Sessional Examinations.

W. A. Kneeland, Désiré H. Girouard, Alfred E. Harvey, Robert B. Henderson, Marcus E. Doherty, Rodolphe Lemieux, John H. Dunlop, Thomas J. Vipond.

Standing in the Several Classes.

INTERNATIONAL LAW.—Lately Professor KERR, now Professor TRENHOLME.

First, HENDERSON.
Second, LEMIEUX.

ROMAN LAW.—Professor HUTCHISON.

First, HENDERSON and GIROUARD, equal.
Second, DOHERTY.

MUNICIPAL LAW.—Professor ARCHIBALD.

First, KNEELAND.
Second, HENDERSON.

LEGAL HISTORY.—Professor LAREAU.

First, HARVEY.
Second, LEMIEUX and DUNLOP, equal.

CIVIL PROCEDURE.—Professor HUTCHINSON.

First, KNEELAND.
Second, DOHERTY and GIROUARD, equal.

CIVIL LAW.—Professor ROBIDOUX.

First, GIROUARD and DOHERTY, equal.
Second, HENDERSON.

COMMERCIAL LAW.—Professor DAVIDSON.

First, GIROUARD.
Second, HARVEY and KNEELAND, equal.

FACULTY OF MEDICINE.

THE HOLMES GOLD MEDAL, FOR THE BEST EXAMINATION IN ALL THE BRANCHES COMPRISED IN THE MEDICAL CURRICULUM, is awarded to Neil D. Gunne of Seaforth, Ont.

THE PRIZE FOR THE BEST EXAMINATION IN THE FINAL BRANCHES is awarded to William Grant Stewart of Arundel, Quebec.

THE PRIZE FOR THE BEST EXAMINATION IN THE PRIMARY BRANCHES is awarded to Robert Edward McKechnie, of Winnipeg, Manitoba.

THE SUTHERLAND GOLD MEDAL is awarded to Charles Peter Bisset, of River Bourgeois, Nova Scotia.

The following, arranged in order of merit, deserve honourable mention :—

In the Primary Branches :—C. P. Bissett, E. J. Bowes, E.G. Broderick, G. L. McKee, M. W. Murray, W. E. Inksetter, A. H. Coleman, T. H. Ellis, C. T. Noble, W. A. Wilson.

In the Final Branches :—J. E. Orr, R. M. Kincaid, J. R. Springle, A. E. Orr, H. D. Fritz, H. V. Pearman, J. H. Thompson, H. E. Young, A. D. Stewart, D. McLennan, P. C. Park, O. H. Hubbard.

PROFESSOR'S PRIZES.

BOTANY.—W. A. Farwell, Lennoxville, Q.

ANATOMY.—Demonstrator's Prize : 2nd year, P. E. McKechnie. 1st year, E. A. Grafton.

OBSTETRICS.—W. G. Stewart.

PATHOLOGY.—N. D. Gunne.

FACULTY OF ARTS.

GRADUATING CLASS.

B.A. Honours in Classics.

DAY, JOHN L.—First Rank Honours and Chapman Gold Medal.

B.A. Honours in Natural Science.

LE ROSSIGNOL, JAMES E.—First Rank Honours and Logan Gold Medal.

GILES, WILLIAM J.—First Rank Honours.

EVANS, C. BLANCHE B.—First Rank Honours.

RITCHIE, OCTAVIA G.—First Rank Honours.

B.A. Honours in Mental and Moral Philosophy.

PEDLEY, HILTON.—First Rank Honours and Prince of Wales Gold Medal.

MCFEE, DONALDA.—First Rank Honours.

LINDSAY, NORMAN.—Second Rank Honours.

B.A. Honours in English Language, Literature and History.

HUNTER, GEORGINA.—First Rank Honours and Shakespeare Gold Medal.

MARTIN, CHARLES F.— First Rank Honours.

Special Certificates.

MACALLUM, FREDERICK W.

BRYAN, ANDREW C.

THIRD YEAR.

DEEKS, WILLIAM E.—First Rank Honours in Natural Science; First Rank General Standing; Prize in Zoology.

GIBSON, WILLIAM D.—First Rank Honours in Classics and Prize; Prize in English.

TRUELL, HARRY V.—First Rank Honours in Mental and Moral Philosophy and Prize.

ROBERTSON, JAMES.—First Rank Honours in Mental and Moral Philosophy.

STEVENSON, JAMES H.—First Rank General Standing; Prize in English.

PASSED THE SESSIONAL EXAMINATIONS.

Wilson; Reid and Squire, equal; Gibson, Deeks, Stevenson, Truell, Robertson, Rogers; Garth and Meighen, equal; McKenzie, Holden and Walsh, equal; Jamieson, McCusker, Read.

SECOND YEAR.

TORY, H. M.—(Guysboro' Academy, N.S.)—First Rank Honours in Mathematics and Prize.

HALL, ALEXANDER R.—(Gananoque High School).—Second Rank Honours in Mathematics and Prize.

DALEY, JAMES.—(Uxbridge High School.)—First Rank General Standing; Prize in English, Prize in German.

NICHOLLS, ALBERT G.—(High School, Montreal).—First Rank General Standing.

MCDOUGALL, ROBERT.—(Huntingdon Academy, P.Q.)—First Rank General Standing; Prize in French.

FRASER, DANIEL J.—(Prince of Wales College, Charlottetown, P. E. I.)—First Rank General Standing; Prize in Logic.

SUTHERLAND, HUGH C.—(Private Tuition).—First Rank General Standing; Prize in Hebrew.

ROBERTSON, ANDREW A.—(High School, Montreal).—First Rank General Standing.

MACK, SILAS W.—(Stanstead Wesleyan College, P.Q.)—Prize in Botany.

COLCLOUGH, WILLIAM F.—(Middleton Grammar School, England).—Prize in Classics.

DAVIDSON, PEERS.—(High School, Montreal).—Prize in English.

PASSED THE SESSIONAL EXAMINATIONS.

Daley, Williams, Derick, Nicholls, McDougall, Abbott, Fraser, Sutherland, Robertson, Scott, Mack, Botterell (H. I. R.), Colclough, Davidson, Botterill (J. T.), Tolmie, Hall (A. R.), Elliott, McGregor, Tory, Richardson, Mathewson, Macfarlane, McDuffee, Hall (R. S.), Walsh, Kinghorn, Trenholme, Cameron, Fry, Ross, Finch (C. W.).

FIRST YEAR.

McMillan, James.—(Private Tuition).—Second Rank Honours in Mathematics and Prize.

McGregor, John M.—(High School, Montreal).—Second Rank Honours in Mathematics and Prize; First Rank General Standing, Prize in French, Prize in German.

LeRossignol, Walter J.—(High School, Montreal).—First Rank General Standing, Prize in Classics, Prize in French, Prize in Chemistry.

Gunn, William T.—(High School, Montreal) —First Rank General Standing.

Warne, James F.—(Stanstead Wesleyan College, P.Q.).—First Rank General Standing, Prize in English.

Harris, William.—(Collegiate Institute, St. Catharines, Ont.).—Prize in Hebrew.

PASSED THE SESSIONAL EXAMINATIONS.

LeRossignol, McGregor, Gunn, Warne (J. F.), Ellenwood, Reeves, Oliver, Mooney Dobson, Hall; Harris and Mewhort, equal; Robinson, McAlpine, Flinn, Finley, Warne (W. A.), Mattice, Smith, McMillan (H.), McMillan (J.), Young, Tees, Russell, Cole, Walsh, Cooper, Colquhoun, Allen, Baillie, Hipp, Moffatt, McDougall, Moore (L.), Whyte.

Profeessor's Priz for collection of Fossils, LeRossignol J. E.—Fourth Year Student.

Professor's Prize for Collection of Insects, Giles W. J.—Fourth Year Student.

Neil Stewart Prize in Hebrew, Macallum, F. W.—Fourth Year Student.

Early English Text Society's Prize, Martin, Charles F.—Fourth Year Student.

At the Examinations in September, 1887, the following *Scholarships* and *Exhibitions* were awarded :—

SCHOLARSHIPS—TENABLE FOR TWO YEARS.

Third Year.—*Classical and Modern Language Scholarships.*—*Truell, H. V.; **Deeks, W. E.

Third Year.—*Natural Science Scholarship.*—*Gibson, W. D.

EXHIBITIONS—TENABLE FOR ONE YEAR.

Fourth Year.—*The Exhibition of $125 yearly awarded in 1886 for Natural, Science to Giles, W. J., was continued for another year for distinguished progress in Third Year studies.

SECOND YEAR.—*McDougall, Robert (Huntingdon Academy, P.Q.); *Robertson, A. A. (High School, Montreal); †Nicholls, A. G. (High School, Montreal).

FIRST YEAR.—*McGregor, J. M. (High School, Montreal); *LeRossignol, W. J. (High School, Montreal).

SESSIONAL EXAMINATIONS, 1888.

McGILL COLLEGE.

*The mark * in the following list indicates Partial or Occasional Students.*

GREEK.

B.A. ORDINARY.—*Class I.*—Day, Mason, Macallum, Bryan. *Class II.*—Howitt. *Class III.*—Thurlow.

THIRD YEAR.—*Class I.*—Gibson (*Prize*); Squire (*Prize*); Stevenson. *Class II.*—Jamieson, Garth. *Class III.*—Walsh; Meighen and Robertson, equal; Read; McCusker and Mackenzie, equal.

SECOND YEAR.—*Class I.*—Abbott (*Prize*), McDougall, Colclough; Derick and Fraser, equal; Nicholls, Daley, Robertson. *Class II.*—Tolmie, Fry, Hall (A. R.), Trenholme, Davidson, Mack, Mathewson; Kinghorn and Cameron and Sutherland, equal. *Class III.*—Hall (R. S.), Ross, McVicar, McGregor, McDuffee, Richardson, Walsh, Tory, Martell, Finch, Elliott.

FIRST YEAR.—*Class I.*—Le Rossignol (*Prize*), McGregor, Ellenwood; Gunn and Reeves, equal. *Class II.*—Dobson; Flinn and Hipp, equal; Oliver, McAlpine, Harris; Cooper and Young, equal; McDougall. *Class III.*—Warne (J. F.), Moore, Tees; Cole and Russell, equal; Ellicott, Colquhoun, Holden; McMillan and Walsh and Warne (W. A.), equal; Whyte, Judge, Allen, Cameron, McCallum, Craik.

LATIN.

B.A. ORDINARY—*Class I.*—Day, Bryan; McPhail and Palmer, equal. Cross. *Class II.*—Martin and Murray, equal; Bryson. *Class III.*—Murphy and Sweeny, equal; Larkin and Masse, equal; England.

THIRD YEAR.—*Class I.*—Gibson (*Prize*); Squire (*Prize*); Wilson, Reid; Meighen and Rogers, equal. *Class II.*—Truell. *Class III.*—Garth.

SECOND YEAR.—*Class I.*—Colclough and Williams, equal (*Prizes*); Derick, Daley; Abbott and Nicholls, equal; Fraser. *Class II.*—McDougall, Scott, Sutherland, Mack, Davidson, Botterell (J.), Botterell (I.), McDuffee, Fry, Tolmie, Robertson, Cameron. *Class III.*—Richardson, Tory, Mathewson, Hall (A. R.), Hall (R. S.); Kinghorn and Trenholme, equal; McGregor, Martell, McVicar; McFarlane and Walsh, equal; Elliott and Finch, equal.

---

* Value of Scholarship or Exhibition, $125 yearly; founder, W. C. MacDonald, Esq.
† Value, $125 yearly; donor George Hague, Esq.
**Value, $120 yearly; founder, Charles Alexander, Esq.

SECOND YEAR.—(*Latin Prose Composition.*)—*Class I.*—Williams, Fraser; Abbott and Colclough and Daley, equal. *Class II.*—Nicholls, McDougall; McDuffee and Trenholme, equal; Derick, Sutherland; Finch and Mack, equal; Tolmie, Botterell (I.), Robertson and Hall (R. S.), equal. *Class III.*—McGregor, Scott, Davidson, Elliott, Hall (A. R.); Botterell (J.) and Fry and Mathewson, equal; Richardson, Cameron, Kinghorn, McVicar, Walsh, Ross.

FIRST YEAR.—*Class I.*—Le Rossignol (*Prize*); Waud, Reeves, McGregor, Ellenwood, Warne (J. F.) *Class II.*—Gunn and Mewhort, equal; Hipp; Dobson and Oliver, equal; McAlpine; Hall and Smith, equal; Mattice, McDougall, Moore, Russell. *Class III.*—Allen; Moffatt and Robinson, equal; McMillan (H.), Harris, McMillan (J.), Young, Warne (W. A.), Cooper; Colquhoun and Flinn, equal; Cole, Richardson, James; Baillie and Mooney, equal; Buchanan, Finley, Cameron, McCallum, Walsh, Ellicott, Tees, Mitchell.

GREEK AND ROMAN HISTORY.

FIRST YEAR.—*Class I.*—LeRossignol and McGregor, equal; Oliver, Gunn; Warne (J. F.) and Ellenwood, equal; Warne (W. A.), Flinn. *Class II.*—Russell; Harris and McAlpine, equal; Craik and Mewhort, equal; Richardson, Dobson; Baillie and Young, equal; McMillan (H.), Mattice, Moore. *Class III.*—James, Ellicott; Judge and McLeod and Tees, equal; Smith, Mooney, Cole, Hall, Finley, McDougall, Cooper, Reeves, Holden; Colquhoun and Robinson, equal; Walsh, Buchanan, Whyte; Graham and Hamilton, equal; Allen, McMillan (J.)

MENTAL AND MORAL PHILOSOPHY.

B.A. ORDINARY.—(*Moral Philosophy*).—*Class I.*—McFee (D.), Pedley, Macallum, Mason, MacPhail, Cross; Howitt and Murray (A.), equal; Palmer, Naismith; Bryan and Larkin and Lindsay, equal; Massé, Murphy. *Class II.*—Bryson, *Charters. *Class III.*—Thurlow, England, *Gunn, Sweeny.

B.A.—(*Additional Department in Mental and Moral Philosophy*).—*Class I.*—Mason, Pedley, McFee (D.), Lindsay, Howitt. *Class II.*—Thurlow. *Class III.*—England, Bryson.

THIRD YEAR.—(*Additional Department in Mental Philosophy*).—*Class I.*—Wilson, Stevenson, Truell, Robertson. *Class II.*—Jamieson. *Class III.*—*Deeprose, *Johnston, *Medd, *Wells, *Austin, Read.
Prizes.—Wilson, Truell.

SECOND YEAR.—(*Logic*).—*Class I.*—Fraser, Abbott; McDougall and Williams, equal; Daley, *Patton; Elliott and Sutherland, equal; Hall (A. R.) and Trenholme, equal; Botterell (J. T.) and Davidson and Derick and Kinghorn and Tolmie, equal. *Class II.*—Nicholls, McGregor, (A.) and Scott, equal; Colclough; Hall (R. S.) and Robertson, equal; McDuffee, Cameron; Mack and Botterell (I. R.), equal; Tory; McVicar and Richardson, equal. *Class III.*—Kennedy (J.); Long and Martell

and Matthewson, equal; Tory and Kennedy (M.L.), equal; Medd, Walsh, Moore (C.), Manning and Macfarlane, equal; Beattie and Finch and Moore (S.) and Oaten, equal; Galley and Runions, equal; Kenyon and McGregor (P), equal; Francesco.

EUROPEAN HISTORY.

B.A. ORDINARY.—*Class I.*—Bryan, Hunter, Howitt, Martin. *Class II.*—Cross, Macfarlane, *Waud, Larkin and Mason, equal; Murray and *Redpath, equal; Palmer, *Claxton (C. L.), *Kennedy. *Class III.*—Lindsay, Thurlow, Murphy, England, Pedley.

RHETORIC AND ENGLISH LITERATURE.

THIRD YEAR.—*Class I.*—Gibson and Stevenson (*Prizes*), equal; *Class II.*—Read, Robertson; McKenzie and Truell, equal. *Class III.*—Jamieson, Rogers.

ENGLISH LITERATURE AND HISTORY.

SECOND YEAR.—*Class I.*—Davidson and Daley, equal; Williams, Derick, Sutherland, Nicholls, Mack, Botterell (J. T.); Hall (A. R.) and McDougall and Scott, equal; Abbott and Vipond, equal. *Class II.*—Tory, Tolmie and Botterell (I. R.); Cameron and McGregor, equal; Matthewson; Colclough and Kinghorn and Robertson, equal. *Class III.*—Fraser; Fry and McDuffee, equal; McVicar and Walsh and Macfarlane, equal; Elliott, Richardson, Paton, Hall (R. S.), Ross.

ENGLISH LITERATURE.

FIRST YEAR.—*Class I.*—Warne (J. F.) (*Prize*); LeRossignol, Mattice, Gunn; McGregor, Ellenwood, Warne (W. A.), Oliver, Mooney; Dobson and McMillan (H.), equal; Robinson, McDougall. *Class II.*—Hall and Harris and McAlpine, equal; Finley, Mewhort; Clark and Tees, equal; McMillan (J.) and Young, equal; Buchanan and Moore (L.) and Reeves, equal; Craik. *Class III.*—Hipp and Smith, equal; Moffatt, Richardson, MacLeod; Colquhoun and Whyte, equal; Ellicott; Capel and Cooper and Sykes, equal; Flinn and Holden, equal; Hamilton; Cameron and Cole and Walsh, equal; Russell, Allen, Moore (C).

MECHANICS AND HYDROSTATICS.

B.A. ORDINARY.—*Class I.*—Naismith. *Class II.*—None. *Class III.*—Bryan, Cross; Bryson and Murphy and Murray and Palmer, equal.

THIRD YEAR.—*Class I.*—Deeks. *Class II.*—Meigben, Truell. *Class III.*—Walsh, McCusker; McKenzie and Rogers, equal; Garth, Read, Holden (D. B.), Jamieson.

ASTRONOMY AND OPTICS.

B.A. ORDINARY.—*Class I.*—Massé, Bryan. *Class II.*—None. *Class III.*—MacPhail; England and Sweeny, equal.

THIRD YEAR.—*Class I.*—None. *Class II.*—Holden. *Class III.*—McKenzie.

EXPERIMENTAL PHYSICS (*Light and Heat*).

B.A. ORDINARY.—*Class I.*—Naismith, Le Rossignol, Massé, Giles; Bryan and Ritchie, equal. *Class II.*—Cross, England. *Class III.*—Sweeny; Bryson and Evans (B.) and Murphy, equal.

THIRD YEAR.—*Class I.*—Deeks, McKenzie. *Class II.*—None. *Class III.*—Meighen, Holden, McCusker, Walsh (R. N.)

B.A. ORDINARY.—(*Additional*) (*Electricity, Magnetism, and Sound. Class I.*—Naismith. *Class II.*—None. *Class III.*—Sweeny.

TRIGONOMETRY AND ALGEBRA.

SECOND YEAR.—*Class I.*—Derick and Nicholls, equal; Robertson, Daley, Tory, McDougall, Elliott, Williams, Martell, Botterell (I. R.). *Class II.*—Fraser, Mack, Abbott, Macfarlane; Scott and Sutherland, equal; Colclough and Richardson, equal. *Class III.*—McVicar and Tolmie, equal; McDuffee, Botterell (J. T.), Hall (R. S.) and McGregor; Trenholme, Hall (A. R.), Mathewson, Finch, Walsh, Ross, Moore, Davidson, Kinghorn, Fry.

FIRST YEAR.—*Class I.*—LeRossignol and McGregor, equal; Hipp, McDougall (R.); Allan and Gunn, equal; Warne (J. F.) and Moffatt, equal; Flinn, Hall, Reeves. *Class II.*—McMillan (Jas.), Holden; Ellenwood and McAlpine and Oliver, equal; Robinson, Tees, White, Mooney. *Class III.*—McLeod (N. A. D.), Dobson, Harris, Mewhort, Judge; Warne (W. A.) and Baillie, equal; Young, Smith, James; Cole and Walsh and Finley, equal; Cameron, Russell, Fraser (A. D.), McMillan (H.), Colquhoun and Cooper; Graham, Mitchell (Thos.), Mattice, Hamilton (D.).

GEOMETRY AND ARITHMETIC.

SECOND YEAR.—*Class I.*—McDougall; Daley and Fraser and Nicholls, equal; Tory, Tolmie, Williams, Sutherland, Mack, Robertson, Hall (A. R.), Derick, Abbott, Elliott; Scott and Ross, equal. *Class II.*—Macfarlane; Cameron and Hall (R. S.), equal; Davidson, Richardson; Botterell (I. R.) and Fry and Kinghorn and McVicar, equal; Finch and McGregor and McDuffee and Trenholme, equal; Martell and Mathewson, equal. *Class III.*—Colclough; Paton and Walsh, equal; Botterell (J. T.).

FIRST YEAR.—*Class I.*—McGregor, LeRossignol, Flinn; Allen and McMillan (J.), equal; Harris, Ellenwood, Warne (J. F.); Dobson and Reeves, equal; *Class II.*—Gunn; Hipp and Whyte and Moffatt, equal; Oliver; Finlay and Mooney, equal; Walsh. *Class III.*—Moore, McAlpine, Tees, Warne (W. A.), James; Cole and Young and McMillan (H.) and Hall, equal; Craik, Judge, Baillie, Holden; Colquhoun and Mitchell, equal; McLeod, Smith, Cooper, Hamilton, Mewhort, Russell, Mattice, Robinson, Fraser.

HONOUR EXAMINATIONS IN MATHEMATICS.

SECOND YEAR.—*First Rank Honours:*—Tory. (*Prize.*)
Second Rank Honours:—Hall, (*Prize.*)

FIRST YEAR.—*Second Rank Honours:*—McMillan, (*Prize*), McGregor), *Prize*).

FRENCH.

B.A. ORDINARY.—*Class I.*—Day, Massé. *Class II.*—Howitt, Bryson, McPhail *Class III.*—None.

Additional Department.—Class I.—Massé.

THIRD YEAR.—*Class I.* — Wilson (*Prize*), Reid, Squire. *Class II.* — Rogers. *Class III.*—Read, Truell, *Kirk.

THIRD YEAR.—*Additional Department.—Class I.*—Reid.

SECOND YEAR.—*Class I.*—McDougall (*Prize*), Williams, Abbott, Elliott, Nicholls, and Derrick, equal; Botterell (I. R.), Mathewson. *Class II.*—Colclough and Davidson and Robertson, equal; Botterell (J. T.); Fry and Mack and Scott, equal; Kinghorn, Hall (A. R.) and Tolmie, equal; McFarlane, Trenholme, Hall (R. S.), McDuffee, Cameron. *Class III.*—Moore; Ross and Walsh, equal.

FIRST YEAR.—*Class I.*—Hipp and McGregor (*Prize*), equal; LeRossignol (*Prize*), Reeves, Baillie, Smith, Moffatt; Holden and Mooney and Oliver, equal; Evans and Gunn, equal; Ellenwood and Hall and Mattice and Robinson, equal; Mewhort and Tees and Warne (J. T.), equal; McDougall, Finley. *Class II.*—McMillan (H.), Michaels, Warne (W. A.), Cole and Judge, equal; Moore, Buchanan and James, equal; McCallum, Richardson, Young, Krusé, Ellicott; Beard and Murray, equal; Cooper, Walsh. *Class III.*—McMillan (J.), Whyte, Cameron.

GERMAN.

B.A. ORDINARY.—*Class I.*—Palmer, *Van Horne. *Class II.*—Murray.

THIRD YEAR.—*Class I.*—Reid (*Prize*) and *Johnson (H.), equal; Meighen. *Class II.*—Gibson.

THIRD YEAR ADDITIONAL.—*Class I.*—Reid and Johnson (H.), equal.

SECOND YEAR.—*Class I.*—Williams (*Prize*), Daley (*Prize*), Martell, *Scott (S), Botterell (I. R.), Macfarlane (M.), *Kruse. *Class II.*—Botterell (J. T.).

FIRST YEAR.—*Class I.*—McGregor (*Prize*), Mooney (*Prize*), Baillie and Mewhort, equal; Finley and McMillan, equal; Smith, Robinson, Hall (B.), Ellenwood. *Class II.*—Mattice and Moffatt, equal. *Class III.*—Richardson.

HEBREW AND CHALDEE.

ADVANCED COURSE.—*Class I.*—Macallum, Stevenson. *Class II.*— Larkin. *Class III.*—McCusker.

CHALDEE COURSE.—*Class I.*—Macallum.

INTERMEDIATE COURSE.—*Class I.*—Sutherland (*Prize*). *Class II.*—McGregor, Richardson, Gunn. *Class III.*—Finch, Watt.

ELEMENTARY COURSE.—*Class I.*—Patton, Harris (*Prize*); Davey, Russell, Garth, Austin. *Class II.*—D. J. Fraser and Sykes, equal; Capel and Moore, equal; Dobson, McAlpine; Kenyon and MacLeod, equal. *Class III.*—Hamilton, Craik, McVicar, Mitchell, Colquhoun.

The Neil Stewart Prize.—Macallum (Fred. W.).

GEOLOGY AND MINERALOGY.

B.A. ORDINARY.—*Class I.*—Le Rossignol; Evans and Giles, equal; Ritchie, Cross, McCallum, *Van Horne, *McLea, Hunter. *Class II.*—*Deeprose, McPhee and McPhail, equal; Mason, Palmer, Murphy, Naismith, Murray. *Class III.*—Gunn, Thurlow, Sweeny.

ZOOLOGY.

THIRD YEAR.—*Class I.*—Deeks and *Deeprose and Wilson, equal; Patton, *Squire; Walsh, Rogers, McKenzie, Garth, Holden. *Class II.*—*Francesco and *Galley and *Wells, equal; *Medd, Johnston, Robertson, Jamieson.

BOTANY.

SECOND YEAR.—*Class I.*—Derick (*Prize*), Abbott; Mack (*Prize*) and Botterell (I. R.) equal; *Patton and Sutherland and Williams, equal; Robertson, Daley, Scott; McDougall and Nicholls, equal; Trenholme, *Francesco; McVicar and Tory, equal; *Oaten and Elliott, equal; McGregor (A. M.) and Botterell (J. T.), equal. *Class II.*—Davidson; Colclough and Mathewson, equal; Hall (A. R.) and Martell and Walsh, equal; Fraser, Richardson, Macfarlane, Cameron, Kinghorn. *Class III.*—McDuffee, *Kennedy, Ross, Fry, Hall R.), *Long, Tolmie, Paton, *Lambly, *Runions, Finch, McGregor (P.).

THIRD YEAR.—*Class I.*—Squire, *Kennedy, Deeks.

Reid (H. R.)—(*Prize*) for best collection of plants.

FOURTH YEAR.—*Class I.*—*Van Horne, McPhail.

CHEMISTRY.

FIRST YEAR.—*Class I.*—Le Rossignol (W. J.) (*Prize*), Warne (J. F.), Mooney, (*Prize*), Clark (H.), Flinn. *Class II.*—Macdougall and Oliver, equal; Walsh and Warne (W. A.), equal; Gunn (W. T.); Manning and Robinson, equal; Hamilton, Hall, Finley (G.), Hipp, Mewhort; Colquhoun and Craik and Dobson and McGregor, equal. *Class III.*—Baillie and Mattice, equal; Mitchell; Cole and Cooper, equal; McMillan (J.); Ellenwood and Stevenson, equal; Reeves, Young; Allan and Harris and Moffatt (E.), equal; McAlpine; Richardson and Whyte, equal; Moore and Russell and Sykes and Tees, equal; Smith (L.G.), Blunt, MacLeod, McMillan (H.)

PRACTICAL CHEMISTRY.—*Class I.*—Finley (M. S.)

WICKSTEED MEDALS (*for Physical Culture*).

HILTON PEDLEY.—Gold Medal.

J. J. Ross.—Silver Medal.

ALEX. R. HALL.—Bronze Medal.

Fred. M. FRY.—Honorable Mention.

SPECIAL COURSE FOR WOMEN (DONALDA ENDOWMENT).

PRIZES AND STANDING.

GRADUATING CLASS.

B.A. Honours in Natural Science.

EVANS, C. BLANCHE B.—First Rank Honours in Natural Science.

RITCHIE, OCTAVIA G.—First Rank Honours in Natural Science.

B.A. Honours in Mental and Moral Philosophy.

McFee, Donalda.—First Rank Honours.

B.A. Honours in English Language, Literature and History.

Hunter, Georgina.—First Rank Honours and Shakespeare Gold Medal.

THIRD YEAR.

Wilson, Alice Maude.—First Rank Honours in Mental and Moral Philosophy and Prize; First Rank General Standing; Prize in Zoology; Priz in French.

Reid, Helen R.Y.—First Rank Honours in Modern Languages; First Rank General Standing; Prize in German; Prize for Collection of Plants.

Squire, Maude M.—First Rank Honours in Natural Science; First Rank General Standing; Prize in Classics.

PASSED THE SESSIONAL EXAMINATION OF THE THIRD YEAR.

Wilson; Reid and Squire, equal.

PASSED IN CERTAIN CLASSES AS PARTIAL OR OCCASIONAL STUDENTS.

Johnson (H.), Kennedy (M. L.), Kirk.

SECOND YEAR.

Derick, Carrie M.—(Normal School, Montreal.)—First Rank General Standing; Prize in Botany.

Abbott, Maude E.—(Misses Symmers' and Smith's School, Montreal)—First Rank General Standing; Prize in Classics; Prize in Logic.

Williams, Annie.—(Girls High School, Montreal).—First Rank General Standing; Prize in Latin; Prize in English; Prize in German.

PASSED THE SESSIONAL EXAMINATIONS OF THE SECOND YEAR.

Williams, Derick, Abbott, Scott, Botterell (I. R.), Botterell (J. T.), Macfarlane.

PASSED IN CERTAIN CLASSES AS PARTIAL OR OCCASIONAL STUDENTS.

Kennedy (M. L.), Krusé, Vipond.

FIRST YEAR.

Mooney, Caroline J.—(Girls' High School, Montreal.)—Prize in Chemistry; Prize in German.

Mattice, Brenda L.—(Girls' High School, Montreal.)—Prize in English.

PASSED IN THE SESSIONAL EXAMINATIONS IN THE FIRST YEAR.

Mooney, Hall, Mewhort, Robinson, Moffatt, Finley, Mattice, Smith, McMillan, Baillie.

PASSED IN CERTAIN CLASSES AS PARTIAL OR OCCASIONAL STUDENTS.

Beard, Evans, Kruse, Michaels, Murray (E.), Waud (E. M.), Stevenson.

---

† The prizes in this department are from income of Hannah Willard Lyman Memorial Fund.

MORRIN COLLEGE.

INTERMEDIATE EXAMINATION.

GREEK.—*Class I.*—Brodie. *Class II.*—Hunter, Anderson. *Class III.*—McCullough, Craig, DesBrisay.

LATIN.—*Class I.*—Brodie. *Class II.*—Hunter, Craig. *Class III.*—Anderson, McCullough, DesBrisay.

LATIN PROSE COMPOSITION.—*Class I.*—Brodie. *Class II.*—Hunter, Craig, Anderson. *Class III.*—McCullough, DesBrisay.

TRIGONOMETRY AND ALGEBRA.—*Class I.*—Hunter, Brodie. *Class II.*—Blue. *Class III.*—Anderson and Craig, equal; Desbrisay.

GEOMETRY AND ARITHMETIC.—*Class I.*—Brodie, Hunter, McCullough. *Class II.*—Blue and DesBrisay, equal; Craig. *Class III.*—Anderson.

LOGIC.—*Class I.*—Brodie. *Closs II.*—Craig, Desbrisay, Hunter. *Class III.*—Anderson, McCullough.

ENGLISH LITERATURE AND HISTORY.—*Class I.*—Brodie. *Class II.*—Hunter, Craig, Blue; Anderson and McCullough, equal; DesBrisay.

FRENCH.—*Class I.*—Brodie, Anderson. *Class II.*—DesBrisay, Hunter. *Class III.*—Blue.

HEBREW.—*Class I.*—Craig, McCullough.

ST. FRANCIS COLLEGE.

INTERMEDIATE EXAMINATION.

GREEK.—*Class I.*—None. *Class II.*—Jones, Farnsworth. *Class III.*—Dresser, Elliott.

LATIN.—*Class I.*—None. *Class II.*—Farnsworth, Reid. *Class III.*—Jones, Elliott.

LATIN PROSE COMPOSITION.—*Class I.*—None. *Class II.*—Reid, Farnsworth. *Class III.*—Jones, Elliott.

TRIGONOMETRY AND ALGEBRA.—*Class I.*—Farnsworth, Dresser, Elliott. *Class II.*—Reid, Jones. *Class III.*—None.

GEOMETRY AND ARITHMETIC.—*Class I.*—Reid, Elliott, Dresser, Jones, Farnsworth.

LOGIC.—*Class I.*—None. *Class II.*—None. *Class III.*—Farnsworth and Reid, equal; Dresser, Elliott, Jones.

ENGLISH LITERATURE AND HISTORY.—*Class I.*—None. *Class II.*—Elliott, Jones, Reid, Dresser, Farnsworth.

FRENCH.—*Class I.*—None. *Class II.*—Dresser, Farnsworth, Elliott, Jones, Reid.

FACULTY OF APPLIED SCIENCE.

GRADUATING CLASS.

ARTHUR LENOX DRUMMOND.—Lansdowne Silver Medal, Prize for Summer Report, Certificates of merit in Designing, Steam Engine, Hydraulics, Machinery and Millwork, and Mechanical Work.

EDGAR SYDNEY MONTGOMERY LOVELACE.—British Association Gold Medal; Certificates of merit in Designing, Hydraulics and Theory of Structures.

MARSHALL WILLARD HOPKINS.—Certificate of merit in Designing and Theory of Structures.

ALFRED JOSEPH TREMBLAY.—Certificate of merit in Astronomy.

ARTHUR EDWARD CHILDS.—Certificate of merit in Practical Construction; prize for Summer Report.

AUBREY GEORGE ENEAS.—Certificate of merit in Practical Construction.

CHARLES HERBERT MACNUTT.—Second Rank Honours in Natural Science; certificate of merit in Mineralogy.

WILLIAM JOSEPH HAMILTON.—Certificate of merit in Chemistry.

PASSED THE SESSIONAL EXAMINATIONS.

THIRD YEAR.

ALLAN WILMOT STRONG.—Prizes in Descriptive Geometry, Surveying, Mathematical Physics, Mathematics and Theory of Structures.

JAMES PRESTON TUPLIN.—Prizes in Mechanical Work and Machinery and Millwork.

PETER LAWRENCE NAISMITH.—Prize in Experimental Physics.

MILTON N. HERSEY.—$25 prize for Summer Report. Prize in Practical Chemistry.

GEORGE MORSE EDWARDS.—Prizes in Theoretical Chemistry, Zoology, Mineralogy.

GEORGE KYLE ADDIE.—Prize for Field-work (Levelling).

PASSED THE SESSIONAL EXAMINATION.

Civil Engineering (*Advanced Course*).

IN ORDER OF MERIT.

Allan Wilmot Strong, John Holden Antliff.

Civil Engineering (*Ordinary Course*).

IN ORDER OF MERIT.

Allan Wilmot Strong, Peter Lawrence Naismith, John Holden Antliff, Malcolm C. McFarlane, Murdy John McLennan, George Kyle Addie.

Mechanical Engineering (*Advanced Course*)

James Preston Tuplin.

Practical Chemistry.

IN ORDER OF MERIT.

George Morse Edwards, Milton N. Hersey, Andrew Young.

SECOND YEAR.

EDWARD ERNEST STUART MATTICE.—Prizes in Mathematics and Mathematical Physics.

GEORGE SINCLAIR SMITH.—Prize in Descriptive Geometry.

PERCY NORTON EVANS.—Prize in Experimental Physics.

ORRIN REXFORD.—Prize in Materials.

ARTHUR E. SHUTTLEWORTH—Prize in Theoretical Chemistry.

PASSED THE SESSIONAL EXAMINATIONS.

Civil Engineering.

IN ORDER OF MERIT.

Edward E. S. Mattice, Charles Herbert Ellacott, Orrin Rexford, Albert Howard Hawkins, William Simeon Denison.

Mechanical Engineering.

IN ORDER OF MERIT.

George Sinclair Smith, George W. Mooney.

Peter Whiteford Redpath (*Æger*).

Practical Chemistry.

IN ORDER OF MERIT.

Percy Norton Evans, Sidney Calvert, Arthur E. Shuttleworth, Robert Henry Jamieson.

FIRST YEAR.

E. A. STONE, prizes in Mathematics, French and German.

JOHN EDWARD SCHWITZER, prize in Practical Chemistry.

WILLIAM H. H. WALKER, prize in General Chemistry.

PERCY HOWE MIDDLETON.—Prize in Freehand Drawing.

PASSED THE SESSIONAL EXAMINATIONS.

IN ORDER OF MERIT.

Ernest Albert Stone, William Henry Hamilton Walker, Thomas Henry Wingham, William Jardine Bulman, Abraham Bowman Clemence, Percy Howe Middleton, John Edward Schwitzer, William Russel, Hugh Yelverton Russel, Henry Martyn Ramsay.

SUMMER REPORT.

THIRD YEAR.—*Class I.*—Hersey (*Prize*) (*Destructive Distillation of Wood*), Antliff (*Lock Gates*), McFarlane (*Surveying*), Tuplin (*Boiler Repairing*). *Class II.*—Addie (*Laying out a Tramway*), McLennan (*Laying out work*) and Naismith (*Levelling*) and Strong (*Indicators*), equal; *Class III.*—Edwards (*Sodium Carbonate*), Hunter (*Levelling*) and Young (*Electro-Metallurgy*), equal.

FOURTH YEAR.—*Class I.*—Childs (*Prize*) (*Locomotive Crank Axles*) and Drummond (*Prize*) (*Slide Valves*), equal; Lovelace (*Montreal and Maskinonge Railway*), Macnutt (*Exploration of Islands on East Coast of James Bay, etc.*), Hopkins (*House Drainage*) and Ogilvy (*Surface and Jet condensers*) and Tremblay (*The System of Survey in the N. W. Territory*), equal. *Class II.*—Eneas (*Sugar Mill and Tripe Effets*). *Class III.*—Roy (*Distribution of Natural Gas in the United States*), Hamilton (*Aniline and some of the Aniline Colours*) and Walters (*The Manufacture and Uses of Ammonia*), equal.

SESSIONAL EXAMINATIONS, 1888.

FREEHAND DRAWING.

FIRST YEAR.—*Class I.*—Middleton (*Prize*) Turner, Russel, (W). *Class II.*—Ramsay and Lucas, equal; Walker, Wingham. *Class III.*—Stuart and Stone, equal; Clemens, Russel (H. T.) and Schwitzer, equal; Bulman, Klock, Fraser.

DESCRIPTIVE GEOMETRY.

SECOND YEAR.—*Class I.*—Smith (*Prize*); Mattice and Redpath equal; Evans; Jamieson and Mooney, equal. *Class II.*—McMillan, Ellacott; Reed and Rexford, equal. *Class III.*—Denison, Monk; Calvert and Smaill and Shuttleworth, equal.

THIRD YEAR.—*Class I.*—Strong (*Prize*). *Class II.*—Tuplin; McFarlane and McLennan, equal; Antliff, Naismith. *Class III.*—Addie.

SURVEYING AND GEODESY.

SECOND YEAR.—*Class I.*—Ellacott and Smith, equal. *Class II.*—Hawkins, McMillan, Mattice, Denison, Rexford, Reed. *Class III.*—Mooney, Williams. Redpath (*Æger*).

THIRD YEAR.—*Class I.*—Strong (*Prize*). *Class II.*—None. *Class III.*—Addie; McLennan and Naismith, equal; Antliff and McFarlane, equal.

GEODESY AND PRACTICAL ASTRONOMY.

FOURTH YEAR.—*Class I.*—Tremblay.

GEOMETRY OF MACHINERY.

SECOND YEAR.—*Class I.*—Mattice. *Class II.*—Mooney and Smith, equal; Redpath, Williams. *Class III.*—Ellacott; Denison and Hawkins, equal; Reed and Mather, equal; Rexford.

THIRD YEAR.—*Class I.*—None. *Class II.*—Tuplin.

DYNAMICS OF MACHINERY.

THIRD YEAR.—*Class I.*—Tuplin (*Prize*).

FOURTH YEAR.—*Class I.*—Drummond (*Certificate of Merit*). *Class II.*—Childs, Ogilvy. *Class III.*—Eneas.

PRACTICAL CONSTRUCTION.

SECOND YEAR.—*Class I.*—None. *Class II.*—Redpath, Williams, Mooney, Mather. *Class III.*—Smith.

THIRD YEAR.—*Class I.*—None. *Class II.*—Tuplin.

FOURTH YEAR.—*Class I.*—Childs (*Certificate of Merit*), Eneas (*Certificate of Merit*), Drummond. *Class II.*—Ogilvy.

MECHANICAL WORK.

SECOND YEAR.—*Class I.*—Mather; Mooney and Redpath, equal. *Class II.*—Williams, Smith.

THIRD YEAR.—*Class I.*—Tuplin (*Prize*).

FOURTH YEAR.—*Class I.*—Drummond, (*Certificate of Merit*), Childs. *Class II.*—Ogilvy and Eneas, equal.

MACHINERY AND MILLWORK (*Advanced*).

FOURTH YEAR.—*Class I.*—Drummond.

THEORY OF STRUCTURES (*Ordinary.*)

THIRD YEAR.—*Class I.*—Strong (*Prize*), Tuplin. *Class II.*—Naismith, Antliff, McFarlane. *Class III.*—McLennan, Addie.

FOURTH YEAR.—(*Civil Engineering Course*). *Class I.*—Lovelace (*Certificate of Merit*), Hopkins (*Certificate of Merit*). *Class II.*—Tremblay.

FOURTH YEAR.—(*Mechanical Engineering Course*). *Class I.*—Drummond. *Class II.*—Ogilvy and Childs equal. *Class III.*—Eneas.

THEORY OF STRUCTURES (*Advanced*).

THIRD YEAR.—*Class I.*—Strong, Tuplin. *Class II.*—Artliff.

FOURTH YEAR.—(*Civil Engineering Course.*)—*Class I.*—Lovelace, Hopkins.

FOURTH YEAR.—(*Mechanical Engineering Course*). *Class I.*—Drummond.

DESIGNS, ESTIMATES, ETC.

FOURTH YEAR.—*Class I.*—Lovelace (*Certificate of Merit*), Drummond (*Certificate of Merit*), Hopkins (*Certificate of Merit*), Childs. *Class II.*—Ogilvy and Tremblay, equal; Eneas, Macnutt. *Class III.*—Roy.

HEAT AND HEAT ENGINES (*Ordinary*).

FOURTH YEAR.—*Class I.*—Drummond (*Certificate of Merit*), Hopkins, Lovelace, Childs. *Class II.*—Ogilvy; Macnutt and Eneas, equal.

HEAT AND HEAT ENGINES (*Advanced*).

FOURTH YEAR.—*Class I.*—Lovelace, Hopkins. *Class II.*—Drummond.

HYDRAULICS.

FOURTH YEAR.—*Class I.*—Lovelace (*Certificate of Merit*), Drummond (*Certificate of Merit*), Hopkins, (*Certificate of Merit*). *Class II.*—Childs. *Class III.*—Macnutt, Ogilvy, Eneas, Roy.

HYDRAULICS (*Advanced*).

FOURTH YEAR.—*Class I.*—Hopkins and Lovelace, equal.

METALLURGY.

FOURTH YEAR.—(*Chemistry Course*).—*Class I.*—Walters. *Class II.*—Hamilton.

FOURTH YEAR.—(*Mining Course*).—*Class I.*—Macnutt. *Class II.*—None. *Class III.*—Roy.

FOURTH YEAR.—(*Mechanical Course*).—*Class I.*—Childs, Drummond. *Class II.*—Ogilvy, Eneas.

PRACTICAL CHEMISTRY.

SECOND YEAR.—(*Chemistry Course*).—*Class I.*—None. *Class II.*—Shuttleworth, Calvert, Smaill, Evans, Jamieson. *Class III.*—Monk.

THIRD YEAR.—(*Chemistry Course*).—*Class I.*—Hersey (*Prize*), Edwards. *Class II.*—Young.

FOURTH YEAR.—(*Chemistry Course*).—*Class I.*—Hamilton. *Class II.*—Walters.

THEORETICAL CHEMISTRY.

SECOND YEAR.—(*Chemistry Course.*)—*Class I.*—Shuttleworth (*Prize*). *Class II.*—Calvert, Evans, Jamieson. *Class III.*—Smaill.

THIRD YEAR.—(*Chemistry Course*).—*Class I.*—Edwards (*Prize*), Hersey. *Class II.*—Young.

ESSAY.

SECOND YEAR.—*Class I.*—Hawkins, Mattice; Mooney, and Redpath, equal; Ellacott and Evans and Rexford, equal; Calvert and Shuttleworth and Smith, equal. *Class II.*—Jamieson and Smaill, equal; Denison and Williams, equal; Mather. *Class III.*—Monk, Reed.

THIRD YEAR.—*Class I.*—Edwards and Hersey and McLennan and Naismith and Tuplin, equal; Strong. *Class II.*—Young; Antliff and Addie, equal, *Class III.*—McFarlane.

FOURTH YEAR.—*Class I.*—Hopkins, Drummond, Lovelace, Childs, Macnutt, Tremblay; Hamilton and Eneas, equal. *Class II.*—Ogilvy, Roy, Walters

METEOROLOGY.

FOURTH YEAR.—*Class I.*—Childs.

GENERAL CHEMISTRY.

FIRST YEAR.—*Class I.*—Walker, (*Prize,*) Stone and Bulman, equal; Schwitzer, *Class II.*—Wingham, Clemens, Middleton, Ramsay, Russel, (H.) Lucas, Russel, (W.) *Class III.*—Klock, Fraser.

SECOND YEAR.—*Class I.*—None. *Class II.*—Smith, Rexford. *Class III.*—Denison, McMillan, Mather.

PRACTICAL CHEMISTRY.

FIRST YEAR.—*Class I.*—Schwitzer, (*Prize,*) Middleton, Wingham; Stone and Walker, equal. *Class II.*—Bulman, Ramsay, Klock, Clemens, Russel, (W.) *Class III.*—Lucas, Fraser, Russel, (H.) Stuart and Turner, equal.

BOTANY.

SECOND YEAR.—*Class I.*—Calvert, Evans, Shuttleworth, Jamieson, Smaill. *Class II.*—Monk.

MATERIALS.

SECOND, THIRD AND FOURTH YEARS.—*Class I*—Rexford (*Prize*), Strong, Hopkins, Tuplin; Macnutt and Naismith, equal; Childs, Hawkins, Mattice, McFarlane, Lovelace, Drummond, Tremblay, Mooney *Class II.*—Addie, Eneas, Ellacott; McLennan and Ogilvy, equal; Redpath, Smith, Antliff Willliams, Roy. *Class III.*—Reed, Denison.

GEOLOGY AND MINERALOGY (*Ordinary*).

THIRD YEAR.—*Class I.*—None. *Class II.*—Hamilton, Walters, Naismith, McLennan. *Class III.*—McFarlane, Addie, Strong, Antliff.

GEOLOGY AND MINERALOGY (*Advanced*).

FOURTH YEAR.—(*Mining Course*).—*Class I.*—None. *Class II.*—Macnutt. *Class III.*—Roy.

MINERALOGY (*Advanced*).

THIRD YEAR.—*Class I.*—Edwards (*Prize*), Hersey. *Class II.*—Young.

ZOOLOGY AND PALÆONTOLOGY.

SECOND YEAR.—*Class I.*—Edwards (*Prize*), Ellacott; Hersey and Mattice, equal. *Class II.*—Rexford; Hawkins and Reed, equal; Young. *Class III.*—Denison.

ASSAYING.

FOURTH YEAR.—(*Mining and Chemistry Courses*).—*Class I.*—Hamilton. *Class II.*—Walters and Macnutt. *Class III.*—Roy.

MATHEMATICS.

FOURTH YEAR.—(*Advanced Astronomy*). *Class I*—Tremblay (*Certificate of Merit*)

THIRD YEAR.—*Class I.*—Strong (*Prize*), Antliff, McFarlane. *Class II.*—McLennan, Naismith. *Class III.*—Addie.

THIRD YEAR.—(*Advanced*). *Class I.*—Strong (*Prize*). *Class II.*—Tuplin. *Class III.*—Antliff.

SECOND YEAR.—*Class I.*—Mattice (*Prize*). *Class II.*—Smith, Mooney, Hawkins, Denison. *Class III.*—Redpath, Ellacott, McMillan, Mather, Rexford.

FIRST YEAR.—*Class I.*—Stone (*Prize*), Bulman, Clemence, Russel (W.), Wingham, Walker. *Class II.*—Ramsay, Schwitzer, Middleton, Russel (H.), Stuart. *Class III.*—None.

MATHEMATICAL PHYSICS.

THIRD YEAR.—*Class I.*—Strong (*Prize*), Edwards. *Class II.*—McFarlane; Antliff and Tuplin, equal; Naismith, Addie, Hersey. *Class III.*—Young, McLennan.

SECOND AND THIRD YEARS.—*Class I.*—Mattice (*Prize*), Denison. *Class II.*—Ellacott, Evans. *Class III.*—Hawkins and Mooney, equal; Redpath and Smith, equal; Calvert and Jamieson, equal; Shuttleworth, Rexford.

EXPERIMENTAL PHYSICS (*Light and Heat*).

THIRD YEAR.—*Class I.*—Naismith (*Prize*); Edwards and Hersey and Tuplin, equal; Young, Strong. *Class II.*—McFarlane, Addie. *Class III.*—Antliff,

SECOND YEAR.—*Class I.*—Evans (*Prize*), Mattice; Calvert and Smaill, equal; Reed, Smith, Mooney. *Class II.*—Hawkins, McMillan; Jamieson and Rexford, equal; Williams. *Class III.*—Shuttleworth; Denison and Ellacott, equal; Monk.

(*Æger*) Redpath.

FRENCH.

FIRST YEAR.—*Class I.*—Stone (*Prize*), Wingham. *Class II.*—None. *Class III.*—Russel, H., Bulman, Schwitzer, Klock.

SECOND YEAR.—*Class I.*—None. *Class II.*—Mattice, Mooney. *Class III.*—Williams, Rexford.

(*Æger*) Redpath.

THIRD YEAR.—*Class III.*—Addie.

GERMAN.

SECOND YEAR.—*First Division.*—*Class I.*—Evans, Calvert. *Class II.*—Shuttleworth, Monk. *Class III.*—Jamieson, Reed. *Second Division.*—*Class I.*—None. *Class II.*—Hawkins. *Class III.*—Smith, Ellacot, Mather, Denison.

FIRST YEAR.—*Class I.*—Stone (*Prize*), Walker, Clemens, Lucas, Russel (H.). *Class II.*—Middleton. *Class III.*—Russel (W.).

ENGLISH LITERATURE.

FIRST YEAR.—*Class I.*—Wingham, Stone, Russel (H.), Walker. *Class II.*—Bulman, Schwitzer. *Class III.*—Clemens, Russel (W.), Middleton.

ENGLISH.

THIRD YEAR.—*Class I.*—Tuplin. *Class II.*—Hersey. *Class III.*—McLennan, Edwards, Young.

SECOND YEAR.—*Class I.*—Evans; Calvert and Mattice, equal. *Class II.*—Jamieson and Mooney, equal; Rexford, Smith, Reed. *Class III.*—McMillan, Shuttleworth, Ellacott, Hawkins, Smaill, Monk, Williams, Mather.

PASSED SUPPLEMENTAL EXAMINATIONS IN FACULTY OF ARTS, 1887-8

I.—September, 1887.

(*a*) Supplemental Sessional.

THIRD YEAR.—England, Thurlow.
SECOND YEAR.—McCusker.
FIRST YEAR.—Richardson, P. L.

(*b*) Supplemental in one subject.

SECOND YEAR.—Henderson (M.), Meighen, Mackenzie, Walsh (T. N.).
FIRST YEAR.—Ault, Finch, Martell, McGregor.

II.—February, 1888.

(Supplemental to Christmas Examination.)

(*a*) Supplemental terminal.

THIRD YEAR.—McCusker, Meighen.
FIRST YEAR.—Smith (L.).

(*b*) Supplemental in one subject.

FOURTH YEAR.—Bryson, England, Sweeny.

SECOND YEAR.—Elliott, Finch, Hall (A. R.), McGregor (A. M.), McDuffee, McVicar, Martell, Paton, Walsh.

FIRST YEAR.—Barlee, Cameron, Cooper, Craik, Hall (B.), James, McAlpine, McMillan (H.), McMillan (J.), McLeod (N.), Mewhort, Tees, Walsh.

Graduates of the University.

DOCTORS OF DIVINITY.

*Bethune, Rev. John, [ad eundum] 1843 *Falloon, Rev. Daniel [Hon] 1844

DOCTORS OF LAWS AND OF CIVIL LAW.

*Abbott, Christopher, B.C.L. (D.C.L., in course) 1862
Abbott, Hon. J. J. C., B.C.L. (D.C.L. in course) 1867
*Adamson, Rev. Wm. A. (D.C.L. hon) 1843
Anderson, Alexander (LL D. hon) 1888
Archibald. Jno. S., M.A. B.C.L. (D.C.L. in course) 1887
Badgeley, Hon. Wm. (D.C.L. hon) 1870
*Bancroft, Rev. C., D.D. (L.L.D. hon) . 1870
Blackwood, Right Hon. Frederick Temple Hamilton-Earl of Dufferin (LL D. hon) 1878
Blanford, William Thomas (LL D. hon.).. 1884
Bond, Rev. Wm., M.A. (LL.D. hon) 1870
Bonney, Rev Thomas George, D. Sc. (LL.D. hon) 1884
Bramwell, Sir Frederick Joseph (LL.D. hon) 1884
Butler, Thomas P., B.C.L. (D.C.L. in course) 1881
Campbell, Right Hon. Sir John Douglass Sutherland, Marquis of Lorne (LL.D. hon) 1883
*Campbell, Geo. W., M.A., M. D. (LL. D. hon.) 1875
Chamberlin, B., M.A, B.C.L. (D.C.L. in course) 1867
Chapman, Rev. Chas., M.A. (LL. D. in course) 1887
Chauveau, Hon. Pierre J. O. (LL.D. hon). 1857
Cordner, Rev. John (LL.D. hon.)..... 1870
Cornish, Rev. George, M. A., (LL. D in course) 1872
*Cushing, Lemuel, M. A. (LL.D. in course) 1879
Darey, Pierre J., M. A., B.C. L. (LL. D hon) 1886
Davidson, Charles Peers, M. A., B.C.L. (D C.L. in course) 1875
Davidson, Leonidas H., M.A , B.C.L. (D.C.L. in course) 1887
*Davies, Rev. Benjamin, Ph.D. (LL.D. hon) 1856
Dawson, Sir J. William, M.A. (LL.D. hon) LL.D. Edin 1857
*DeSola, Rev. A. (LL.D. hon) 1858
Douglass, Rev. Geo (LL. D. hon). 1870
*Doutre, Gonzalve, B.C.L. (D.C.L. in course) 1873
Duff, Rev. Archibald, M.A. (LL.D. in course) 1881
Ells, Robert, M.A. (LL.D. in course).... 1887
*Falloon, Rev D., D.D. (LL.D. hon).. 1862
Frankland, Edward, M. D., D. C. L., Ph. D. (LL. D. hon). 1884
Fream, William, B.Sc. (LL.D. hon)..... 1888
Frechette, Louis H. (LL. D. hon)..... 1881
Galton, Douglas C. B., D.C.L. (LL.D. hon.) 1884
Gauthier, Zéphirin, B.C. L. (D C. L. in course 1883
Gilman, Francis E., M. A., B. C. L. (LL.D. in course) 1877
Girouard, Désiré, B. C. L. (D. C. L. in course) 1874
*Gray, Asa, LL D. (LL.D. hon) 1884
Hall, James (LL.D. hon) 1884
Harcourt, Augustus George Vernon, M.A. (LL.D. hon) 1884
*Head, Right Hon. Sir Edmund W., Baronet, M.A. (LL.D. hon) 1862
Hemming, Edward J., B.C.L. (D.C.L. in course) 1871
Heneker, Richard W., B.C.L. (LL.D. hon) 1888
*Holmes, Andrew F. M.D. (LL.D. hon.) 1858
Howard, R. P., M.D. (LL.D. hon)..... 1886
Howe, Henry Aspinwall, M.A. (LL.D. hon) 1870
Hunt, T. Sterry, M.A. (LL.D. hon)..... 1865
Hutchinson, Matthew, B.C.L. (D.C.L. in course) 1887
Jenkins, Rev. John (D.D. Univ. N. Y.) (LL.D hon) 1879
*Kerr, William H. (D.C.L. in course).... 1873
Kirby, James, M.A., B.C.L. (D.C.L. in course) (LL.D. in course).... 1874
Krans, Rev. Edward H., M.A. (LL.D. in course) 1887
Laflamme, Hon. R. G., B.C.L. (D. C. L. in course) 1873
Lawson, G., Ph.D. (LL D. hon)..... 1862
*Lafrenaye, P. R., B.C.L. (D.C.L. in course) 1873
Lareau, Edmond, B.C.L. (D.C.L. in course 1887
*Leach, Rev. Wm. T., M.A. (D.C.L. hon) 1849
(LL.D. hon) 1857
Lefroy, Sir John Henry, C.B., K.C.M.G. (LL.D. hon) 1884
*Logan, Sir William E. Kt. (LL.D. hon.) 1856
*Lundy, Rev. Francis (D C.L. hon),...., 1843
Lyall, Rev. W. (LL.D. hon) 1864
Macdonald, Sir John Alexander, K.C.B., D C.L. (LL.D. hon) 1884
Maclaren, J. J., B.C.L. (D.C.L. in course) 1888
McGregor, James, M.A. (LL.D. in course) 1880
MacVicar, Rev. D. H. (LL.D. hon) 1870
Meredith, Edmund A., B.C.L. (LL.D. hon) 1857
Miles, Hy. H., M.A. (LL.D. hon). 1866
Morris, Hon. Alexander, M.A., B.C.L. (D.C.L. in course) 1862
Morrison, Rev. Jas. D., M.A. (DD. Union College N.Y.) (LL.D. in course). 1380
Moseley, Henry Nottidge, M.A. (LL.D. hon) 1884
Nichol, Thomas, M.D., B.C.L. (D.C.L. in course) 1887
Ommanney, Sir Erasmus (LL.D. hon)... 1886

Parkman, Francis (M.A. Harvard) (LL.D. hon) 1879
Petty-Fitzmaurice, Henry Charles Keith, Marquis of Lansdowne (LL.D. hon).... 1884
Playfair, Sir Lyon, K.C.B., Ph.D. LL.D. (LL.D hon)..... 1884
Robidoux, J. Emery, B.C.L. (D.C L. in course)..... 1887
Robins, Sampson Paul, M.A. (LL.D. in course)..... 1880
Rollitt, Albert K. (LL.D. London Univ.) (LL.D. ad eun)..... 1871
Roscoe, Sir Henry Enfield, Ph. D., LL.D. (LL.D. hon)..... 1884
Roy, Rev. James, M.A. (ad eun) (LL.D. in course) 1883
Selwyn, Alfred R. C., F.R.S. (LL.D. hon.)..... 1881
Shaw, Rev. Wm. J., M.A. (LL.D. in course) 1887
*Smallwood, Charles, M.D. (LL.D. hon.) 1856
*Smith, William Stuart (LL.D. hon)..... 1858
Strutt, John William, Lord Rayleigh, M.A., D.C.L. (LL.D. hon) 1884
Temple, Sir Richard, Bart., D.C.L., LL.D. (LL D. hon.)..... 1884
Thomson, Sir William, M.A., LL.D., D.C.L. (LL.D. hon).. 1884
Trenholme Norman, W., M.A., B.C.L. (D.C.L. in course) 1887
Tylor, Edward Burnett, D.C.L., LL.D. (LL.D. hon)..... 1884
*Vallières de St. Real, Hon. J. R. (D.C.L. hon.)..... 1844
Wickes, Rev. Henry (LL.D hon.) 1868
Wicksteed, Richard J., M. A. (LL.D. in course) 1879
*Wilkes, Rev. Henry, M A.,D.D. (LL.D. hon.)..... 1870
Wilson, Sir Daniel, LL.D. (LL.D. hon.) 1884
Wurtele, Hon. J. S. C., B.C.L. (D.C.L. in course)..... 1882

*Deceased.

DOCTORS OF MEDICINE.

Aborn, W. H., Goderich, O. 1887
Addison, Jas. L., St. George, O. 1884
*Adsetts, John, 1866
Alexander, Robert A., Grimsby, O. 1871
Alguire, Duncan O., Cornwall, O. 1873
Allard, Henry, Belœil, Q 1866
†Allan, Hamilton, Oconto, Wis 1872
Allan, J. H. B., Montreal 1885
Allen, C. E., East Farnham, Q 1883
Alloway, Thomas Johnson, Montreal 1868
Anderson, Alex., Med. Dept. IndianArmy 1866
*Anderson John C., 1865
Archer, Thos., Wandsworth, Eng 1869
Ardagh, Johnson, Orillia, O 1869
Armitage, J. H., Newmarket, O 1880
Armstrong, Geo. E., Montreal 1877
*Arnoldi, Daniel (Hon.), 1847
Arthur, R. H., C.P.R.R. 1885
Atkinson, Robert, 1862
Ault, Alexander, Ochkosh, Wis 1860
Ault, Charles, Montreal 1855
*Ault, James F., 1855
Ault, Edwin D., Aultsville, O 1868
Austin, Fred. John, Sherbrooke, Q 1862
Ayer, N., M.A., Sackville, N.B 1880
Aylen, John, Aylmer, Q 1857
Aylen, James, Aylmer, Q 1863
Aylen, P., Aylmer, Q 1886
Backhouse, J. B., Braidwood, Ill 1870
Baer, D. C., Summerfield, Ill 1888
Bain, D. S. E., Staff Surgeon M.j. 1868
Bain, Hugh U., Prince Albert, Man 1874
Baird, James G., Pakenham, O 1870
Baird, T. A. D., Bay City Mich 1885
Baker, Albert, Dawlish, Devon 1848
Barclay, George, Parkhill, O 1870
*Barnston, James [ad eun] 1856
Barrett, Jos. A., Fenaghvale, O 1884
Battersby, Charles, Port Dover, O 1861
Baynes, Donald, M. A., London Eng 1876
Baynes, George Aylmer, Montreal, Q 1869
Beatty, D., Richmond, Carlt. Co., O 1862
*Beaudette, Alfred, 1865
Beaudry, Louis B., St. Cesaire, Q 1871
Beckstead, M., Lisbon Centre, St. Law. Co., NY 1878
†Bell, James, Montreal 1877
Bell, J. H., B.A., Montreal, Que 1888
*Bell, John, M A., 1866
Bell, Robert, C. E., Ottawa 1878
Bell, Robert W., Peterboro, O 1873
Belleau, Alfred, Quebec 1862
*Bergeron, Joseph, 1870
Bergin, Darby, Cornwall, O 1847
Berry, J. A., Seeley's Bay, O 1887
Berry, R. P., Lindsay, O 1888
Bessey, William E., Toronto, O 1863
Bender, Prosper, Boston, Mass 1865
Benson, Joseph B., Chatham, N.B 1875
*Bibaud, Jean G., 1843
†Birkett, H. S., Montreal 1886
Blackader, Alex. D., B.A. Montreal 1871
Blackader, E. H. P., B.A., Montreal 1887
Black ock, John J., Chesterville, O 1851
*Blanchet, J. B., 1863
Blair, Robert C., Three Rivers, Q 1865
*Bligh John W., 1865
Bogart, Irvine D., Mene, O 1859
Boggs, G. W., Parrsboro, N S 1886
*Bomberry, Geo. E., 1875
Bonesteel, S. A., Columbus, Neb 1881
Boone, S. W., B. A., Fredericton, N B 1887
Boulter, George H., Stirling, O 1852
Bowen W., B. A., Quebec, Q 1887
Bowser, J. C., Kingston, N B 1883
Boyd, Jay, Vankleek Hill, Q 1887
*Boyer, Louis, 1842
*Boylan, Andrew A., 1857
Boyle, Albert D., Carbonear, Nfld 1877
*Bowman, William E., 1860
Bower, Silas J., Waddington, N Y 1865
*Bradley, William, 1869
Bradley, W. I., B.A., Carlton, O 1888
*Braithwaite, Francis H., 1863
Brandon, John, Ancaster, O 1867
Bresnin, William I., 46th Regiment 1847

Brigham, Josiah S., Phillipsburg, Q 1848
Brissette, Henri R., Lowell, Mass 1871
*Bristol, Amos S., 1850
Brodeur, Alphonse, Roxton Falls, Q 1863
Brodie, John, Honolulu, Sdwh Isl 1877
Brooks, Samuel T. St Johnsbury, Vt 1851
*Brouse, William H., 1847
Brouse, Jacob E., Brockville, O 1861
Brossard, J. B. J., Laprairie, Q 1875
Brown, Thomas L., Melbourne, Q 1881
Brown, J. L., Plattsville, O 1879
Brown, Peter E., Ste Anne de Bellevue Q 1863
Brown, Harry, 405 W. Washington St, Chicago 1873
Brown, Chs. O., Brome, Q 1882
Browne, Arthur A., B.A., Montreal 1872
Bruneau, Adolphe, Sorel Q 1853
*Bruneau, Olivier T. (Hon), 1843
*Bruneau, Onesime, 1851
Bryson, William G., Fenelon Falls, O 1867
Bucke, Richard Maurice, London, O 1862
*Bucke, Edward H , 1852
*Buckle, John M. C., 1869
Buckley, William P., Prescott, O 1870
Bull, George J., New York 1869
*Bullen, Charles F., 1864
Buller, Frank, Montreal 1879
Burgess, J. A , Listowel, O 1868
Burch, B. F. Walla Walla, Walsh Ter 1866
*Burland, John H., 1863
Burland, Samuel C., Chester, Penn 1877
Burland, William B., Montreal 1872
Burland, William H., Punta Gorda, Fla 1875
Burland, Benj. W., Mineville, N Y 1882
Burrows, F. N., Montreal 1885
Burrows, Philip P., Lindsay, O 1866
*Burnham, Robert Wilkins, 1869
*Burns, Alfred J., 1854
Burritt, Horatio C. Toronto, O 1863
Burwash, Hy. J., Milw Ave., Chicago 1879
*Butler, George C., 1865
Buttler, Billa F., Stirling, O 1879
*Buxton, John N., 1849
Cahalan, James, Wyandotte, Mich 1880
†Cameron, Chas. E., Montreal 1883
Cameron, D. A., Strathroy, O 1885
Cameron, Paul, Alexandria, O 1881
Cameron, Duncan H., Portland, Ore 1877
Cameron, James C., Montreal 1874
Cameron, John D., Norway, Mich 1878
Cameron, J. J., Lancaster, O 1888
Cameron, K., Montreal, Q 1887
*Campbell, Donald Peter, 1860
Campbell, Francis Wayland, Montreal 1860
*Campbell, G. W., M.A., (ad eun) 1843
Campbell, J., New Zealand 1876
*Campbell, Samuel, 1866
Campbell, John, Seaforth, O 1869
Campbell, Lorne, Montreal 1882
Campbell, A. W., Montreal 1886
Cannon, Gilbert, Almonte, O 1877
Carmichael, D. A., Mar. Hosp. Serv. Cairo, Ill 1873
Carey, Augur, D. L. (ad eun). 1864
Carman, Philip E., Detroit, Mich 1879
*Carroll, Robert W. W., 1859
Carruthers, Geo., Montreal, Q 1883
Carson, J. H., Lake Park, Minn 1881
*Carson, Augustus, 1843
Carter, L. H., Picton, O 1888
Carter, Samuel A., Meadow Vale, O 1859
Case, W. Hermanus, Hamilton, O 1879
Cassidy, David M., Med. Supt County Asylum, Lancaster, Eng 1867
Cassidy, Geo. A, Goldstone, O 1885
Cassidy, John F., Goderich, O 1865
Casteman, A. L., East Williamsburg, O 1888
Casgrain, Charles E., Windsor, O 1851
Cattanach, Andrew J., Denver, Col 1871
Cattanach, Angus M., Dalhousie Mills, O 1882
Cattanach, W. S., Glen Water, O 1886
Chagnon, Vincelaus G. B., Fall River, Mass 1861
*Chaliner, Francis, 1849
Chalmers, W. W., B.A., Huntingdon, Q 1888
Cherry, William, Toledo, Ohio 1869
*Chesley, George Ashbold, 1862
Chevalier, Gustave, Bedford Q 1860
Chevalier, Napoleon E., Iberville, Q 1873
Chipman, C. J. H., B.A., Ottawa, O 1868
*Chisholm, Alex., Alexandria, O 1878
Chisholm, Murdoch, Bay Roberts, Nfld 1879
Christie, George H., Lachute, Q 1872
Christie, John B , Palaluma, Son Co , Cal 1865
Christie, Thomas, Lachute, Q 1848
Christie, John H., B.A., 833 W. 22nd St., Chicago 1875
Christie, Edmund, Chicago 1882
Christie, William, B.A., Lachute, Q 1887
*Church, Charles H., 1862
Church, Clarence R., Ottawa, O 1868
Church, Coller M., Aylmer, Q 1855
Church, F. W , Hull, Q 1880
Church, Levi R., Montreal 1857
Church, Mills K., Merrickville, O 1864
*Church, Peter H., 1846
Clarke, Hy. J., Winnipeg, Man 1881
Clarke, Octavius H. E., Cohoes, N Y 1870
Clarke, Wallace, B.A., Utica, N Y 1871
Clarke, Richard A., Essex Co., O 1870
Clarke, F. G. B., Fordwych Rd, Kilburn, London, Eng 1876
Clarke, J. L., Waterloo, Q 1886
Clemesha, John W., Port Hope, O 1867
Clement, Victor A., St. Guillaume, Q 1866
*†Cline, John D., B.A., 1874
Clouston, J. R., Howick, Q 1884
Cluness, Daniel, Nanaimo, B C 1870
Codd, Alfred, Winnipeg, Man 1865
*Collins, Charles W., 1869
Collison, R., Norfolk, St Law. Co., N Y 1877
Colquhoun, George, Iroquois, O 1876
Comeau, John B., St David, Q 1870
Conroy, C. P., Martintown, O 1888
Cook, Guy R., B.A., Louisville, N Y 1876
Cook, Hermon L., Napanee, O 1854
Cook, Sheldon E., Aultsville, O 1884
Cooke, Charles H., Toronto, O 1866
Cooke, Sydney P., Hull, Q 1869
Cooke, W. H., Wolfston, Q 1876
Copeland, Wm. L., 719W Wash'n Chicago 1872
*Corbett, A. P. M., 1854
Corbett, William H., Brig. Surg Army Med Dept 1854
Corlis, Josiah, St. Thomas, O 1869
Cormack, Wm., Morristown, O 1881
*Corson, John, 1869
Corson, Douglas, Woodstock, O 1885
Cotton, C. L., Cowansville, Q 1877
Cousins, W. C , Ottawa, O 1882

Cowie, A. M., Montreal, Q 1887
*Cowley, Thomas McJ., 1870
Cowley, D. K., Granby, Q 1880
Cox. Franc, Charlottetown, P E I 1869
Coyle, Henry W., Sorel, Q 1876
Craig, Thornton, Capay, Cal 1876
Craig, M. A., Gleuwater, O 1886
Craik, Robert, Montreal 1854
Cram, Daniel C., Lawrence, Kan 1872
*Crawford, James (ad eun), 1854
Crichten, Stuart. Sonora, Cal 1865
Crocket, W. C., B.A., Fredericton, N B 1886
Crothers, William, Stanbridge, Q 1879
*Culvers, Joseph B , 1848
*Cunninghame. W. C. Thurlow 1858
Cutter, Frederick A , Sutton, Q 1873
Daly, Guy D. F., 1868
Daly, Walter S., Ogdensburg, U S 1885
*Dansereau, Charles, 1842
Dansereau, Charles, 1869
*Dansereau, Pierre, 1835
Davey, J. H., Philadelphia 1886
Davey, J. H., Philadelphia 1866
Davis, Thomas B., Chelsea, Q 1884
Davignon, F. F.. Leadville, Col 1871
Dawson, R., M.A., London 1882
Dazé, Henri, Montreal 1885
Deardon, G. A., Victoria, B C 1882
*Dease, Peter Warren, 1847
DeBonald, C. S., Berthier en haut, Q 1862
DeBoucherville, Charles B., Quebec 1843
DeCow, D. McG , Montreal 1886
DeGrosbois, T. B , Roxton Falls, Q 1868
Demorest. B. G. G., Stirling, O 1852
Derby, W. J.. Rockland, O 1882
*Desaulniers, Antoine A , 1863
Desmond, F. J., Newcastle, N B 1888
*Decelles, Charles D., 1841
Dewar, C. P., Ottawa, O 1888
Dibblee, G. O., Moor's Mills, N B 1880
*Dice, George, 1864
*Dick, James R., 1842
*Dickinson, James S., 1846
*Dickinson. George, 1868
Dickson, William W., Pembroke, O 1863
Dickson, J. A.. Trenholme, Q 1887
Digby, F. Winniett, Brantford, O 1863
*Dodd, John, 1864
Doherty, W. W., Kingston, N B 1885
Donnelly, C. H., Waresville, Texas 1860
*Dorion, Severe, 1843
*Dorland, Enoch G., 1850
Dorland, James. Milwaukee, Wis 1875
Dougan, Wm., St. Catharines, O 1867
Douglass, James (Hon.) 1847
Dowling, John F.. Egansville, O 1875
*Drake, Joseph M., Abbotsford, Q 1861
Dubuc, Charlemagne, Montreal 1864
*Ducket, Stephen, 1853
Duckett, William A., Montreal 1859
Dufort, Thadee A., St Sebastien, Q 1865
Duhamel, Louis, Hull, Q 1860
Duncan, George, Fareham, Hants, Eng 1866
Duncan, Gideon M., Bathurst, N B 1871
Duncan, George C., London, Eng 1875
Duncan, James S., Surg. Maj. Army 1858
*Duncan, John, 1871
Duncan, John A., Moose Jaw, N W T 1884
Duncan, W. T., Fergus Falls, Minn 1882
Dunlop, H. A., Crookston, Minn 1882

*Dunn, William Oscar, 1843
Dunsmore, John M., Stratford, O 1870
Dupuis. Joseph B., Clarenceville, Q 1856
Easton, John, Brockville, O 1852
Easton, C. L., Easton's Corners, O 1887
Eberle, Harry A., Kansas City, Mo 1876
Eberts, D. W., Winnipeg 1885
Edgar, C. J.. Napierville, Q 1887
Edward Eliphalet G , London, O 1855
Edwards, J. S., London, O 1880
Edwards, Oliver C., Qu'Appelle, N W T 1873
Elder, John. B. A. Huntingdon, Q 1885
Elderkin, Edwin J., Avondale Hants Co., N S 1884
Elkington. A. G., Sur. Maj. Gren. Guards 1862
Ellis, W. E., St Catharines, O 1887
Ellison, S. R., 268 W 43rd St., N Y 1873
Emery, Gordon J., Minneapolis, Minn 1857
*English, T. F., 1858
*Erskine, John, 1860
Ethier, Calixte, St. Eugene, Q 1867
Evans, Griffith, Vet. Dept. Army Woolwich, Eng 1864
†Evans, E. J., Seaforth, Q 1887
Ewing. Wm., Hawkesbury, O 1873
Falkner, Alex., Lancaster, O 1866
Falls, Samuel K., Chicago 1875
Farewell, G. McGill, Princeton, O 1872
Farewell, W G., Oshawa, O 1868
Farley, James T., Fremont Centre, Mich 1877
Farley, John J., Belleville, O 1873
Faulkner, George W., Stirling, O 1871
Faulkner, D. W , Foxboro, O 1878
Feader, H. C., Chicago, Ill 1881
Feilde, E. C., Prescott, O 1881
Fenwick, Geo. E., Montreal 1847
Ferguson, Alex. R., Dalhousie Mills, O 1866
Ferguson, Wm. A., B.A., 1884
Ferguson, W. D. T.. Cumberland, O 1888
Fillmore, E. W., Baie Verte, N B 1887
Finlay, F. G , Montreal 1885
*Finlayson, John, 1834
Finnie, John T., Montreal 1869
*Fisher, John, 1847
*Fitzgerald, James, 1865
Flagg, J. D., Morrisburg, O 1887
Fortier, Louis M., Huntingdon, Q 1873
*Forster, Stephen Sewell, 1846
Fraleigh, William S., Gananoque, O 1869
Fraser, Alex. C.. Manitowoc, Wis 1877
Fraser, Donald. Chicago, Ill 1868
Fraser, Donald M., Stratford, O 1869
Fraser, H. D., Mattawa, O 1881
Fraser, J. M., Hawkesbury, O 1887
Fraser, J. R., Metcalfe, O 1878
*Fraser, William, 1836
Fraser, William H., Liverpool, N S 1867
Fritz, H. D., B.A., St. John, N B 1888
Freeman, C. M., Cape Sable Isl , N S 1871
Fuller, W., Grand Rapids, Mich 1866
Fuller, H. LeRoy, B.A., Sweetsburg, Q 1870
Fulton James H., Montreal 1863
Gadman, G. J., Lindsay, O 1886
Gale Hugh, Bay City, Mich 1882
*Garvey, Joseph, 1852
Gardner, A. W., Montreal, Q 1887
Gardner, H. H., San Francisco, Cal 1878
Gardner, John J., Montreal 1883
Gardner, Matthew, Sacramento, Cal 1871
Gardner, Wm., Montreal 1867

Gairdner, T. M., Bayfield, O 1886
*Gascoigne, Geo. E., 1861
Gaviller, Edwin A., Hamilton, O 1873
*Gauvreau, Elzear, 1855
*Gauvreau, Lewis H., 1836
Gendron, Thomas St. Raymond, Q 1866
Gernon, George W., Marieville, Q 1872
*Gibb, George D., 1846
Gibson, John B., Cowansville, Q 1855
Gibson, W. B., Burlington, Vt 1878
*Gibson, Edward B., 1864
Gibson, J. B., Cowansville, Q 1886
Gilbert, Henry L., Sherbrooke, Q 1875
Gillis, John A. F., Summerside, P E I 1877
Gillies, John, Teeswater, O 1867
Gilmour, Angus A., Modesca, Cal 1868
*Giroux, Philippe, 1859
Girdwood, Gilbert P., Montreal 1869
Glen, C. W. E., Chambly, Q 1858
Godfrey, Robert, Montreal 1844
Godfrey, Abraham C., Freemantle, Southampton, Eng 1865
*Goodhue, P. J., 1875
Goforth, Franklin, Runcorn, Chester, Eng 1863
Gooding, Chs. E., St. Philip, Barbadoes, W I 1884
Goodwin, W. W., Baie Verte, N B 1888
Gordon, C. M. Aylwin, O 1881
Gordon, Robert, Arlington, Ill 1868
*Gordon, W. W., 1863
Graham, Charles E., Hull, Q 1865
Graham George A., 1884
*Graham, Henry, 1863
Graham, Kenneth D., Ottawa 1875
Graham, J., Carp, O 1886
Grant, Donald J., Woodbridge, O 1863
Grant, Sir James A., Ottawa 1854
Grant, Jas. A., jun., B.A., Ottawa, 1882
Grant, Wm., Perth, O 1867
Grant, J. H. Y., Ottawa 1886
Gray, John S., Winnipeg, Man 1876
Gray, Thomas, St. Marys, O 1879
Gray, James, 1883
Gray, W. L., Pembroke, O 1881
Greaves, Henry C., Barbadoes 1877
Greenwood, F. S., St. Catharines, O 1878
Greer, T. A., C.SS. Minia, Halifax, N S 1876
*Grenier, L. P. A., 1863
Groves George H., Carp, O 1879
Groves, W., Carp, O 1886
Guerin, James J. E., Montreal, 1878
Guest, Thomas F., St. Mary's, O 1873
Gunn, James, Durham, Gray Co. O 1861
†Gunne, N. D., Seaforth, O 1888
Gurd, David F., Montreal 1879
Gustin, Smith, Bay City, Mich 1885
Gustin, Wm. Claud, Detroit, Mich 1863
Haentschel, C. W., Montreal, Q 1888
Hagarty, Dad. M. J., Portage la Prairie Manitoba, 1866
Haldimand, A. W., Montreal, Q 1888
*Hall, Archibald, (ad eun) 1848
*Hall, James B., 1866
*Hall, J. W. 1848
Hall, A. G., Franklin, Q 1887
Hall W., Walkerton, O 1887
Hallett, E. O., Truro, N S 1885
Halliday, James T., Peterboro, O 1865
*Hamilton, Andrew W., 1859
Hamilton, Charles S., Demorestville, O 1868
Hamilton, John R., Stratford, O 1871
*Hamilton, Rufus F., 1861
Hamel, Joseph A., Murray Bay, Q 1856
*Hamer, A. L., Bradford, Q 1887
Hammond, J. H., Montreal 1869
Hanna, A. E., Harlem, O 1885
Hanna, Franklin, Lansdowne, O 1879
Hanover, Willlam, Seaforth, O 1875
Hanvey, C. J. B., Yale, B C 1883
Harkin, F. McD., Vankleek Hill, O 1885
Hart, F. W., St. Martinville, La 1835
Harvie, J. B, 585 1st St., Troy. N Y 1881
Harvey, William A., Harriston, O 1874
*Harding, F. W., 1868
Harkin, Henry, Liverpool, Eng 1867
*Harkin, William. 1858
Hardness, John, Dickinson's Corners, O 1862
Harkness, Andrew, New Lancaster, O 1869
Harrison, David H., Manitoba 1864
Harrison, H. J., Moulinette, O 1883
Hart, George C., Prescott, O 1879
Hannington, E. B. C., Yale, B C 1875
Hawkins, A. C., Halifax, N S 1885
Hand, H. E., Buffalo, N Y 1881
Hayes, James, Simcoe, O 1866
Haythorne, T. J., B.A., Charlottetown, P E I 1886
Heard, C. DeW., Keelby, Eng 1880
Hebert, P. Zotique, Whitehall, N Y 1873
†Henderson, Alex. A., Ottawa, 1870
*Henderson, E. G , 1874
*Henderson, Peter, A.M., 1848
Henderson, Andrew, Calgary, N W T 1880
*Henry, Walter, [Hon.] 1853
*Henry, Walter J., 1856
Henry, Wm. G., Detroit, Mich 1883
Henwood, Alfred J., Brantford, O 1879
*Hervey, Jonas J., 1866
Hetherington, Harry, Hatley, Q 1872
Hewitt, J., Quebec, Q 1888
Hickey, Charles E., Morrisburg, O 1866
Hickey, Samuel A., B.A., Aultsville, O 1874
Higginson, H. A., Winnipeg. Man 1881
Hills, Joseph, Woonsocket, R I 1873
Hingston, W. H., Montreal 1851
Hoare, C. W., Strathroy, O 1888
Hockridge, Thos. G., London, Eng 1874
*Holden, Rufus, 1844
Holwell, John, Kingston, Jamaica 1868
*Holmes, Andrew F., (ad eun) 1843
Hopkins, Alfred J., Cookshire, Q 1883
Hopkins H. J., Cookshire, Q 1888
Houston, D. W., Cohoes, N Y 1881
Howard, James, Lachine, Q 1867
Howard, Robert, St. Johns, Q 1872
Howard, R. Palmer, LL. D [Hon.] Montreal 1848
†Howard, R. J. B., B.A., Montreal 1882
Howden, Robert T., Winnipeg, Man 1857
Howley, W. H., North Bay, O 1878
Howitt, Wm. H., Toronto, O 1870
Howland, Francis L., Huntsville, O 1867
Hubbard, O. H , Gilsam, N H 1888
Hughes, P. H., Strathroy, O 1886
Hurlbert, E. Augustus, Brooklyn, N Y 1860
Hume, William L., Leeds, Q 1875
*Hunt, J., 1881
Hunt, Henry, Williamstown, O 1876
Hunt, J. H., Sur. Maj. Army Med Dep 1869
Hunt, Lewis G., B.A. Sheffield, Eng 1871
†Hurd, Ed. P., Newburyport, Mass 1865

Hurdman, Benj. F. W., Ottawa, O 1882
Hurdman, H. T., Aylmer, Q 1885
Hurlburt, George W., Thornbury, Q 1859
Hurlburt, Richard W., Mitchell, O 1873
Hutchinson, John A., Montreal, Q 1873
Hutchison, James A., Montreal 1884
Imrie, A W., Detroit, Mich 1879
Inkselter, D. G., Costa Rica 1880
Irvine, James C., Liverpool, Eng 1866
Irvine, R. T., Carp, O 1885
Irwin, J. L., 205 E Ohio St., Chicago 1879
Ives, Eli, Coaticooke, Q 1863
*Jackson, A. T., 1846
Jackson, Wm. Fred., Brockville, O 1873
Jackson, Joseph A., Manchester, N H 1879
*Jamieson, Alex., B.A., 1877
Jamieson, Thomas A., 1875
Jamieson, Chas. J., Winnipeg, Man 1879
Johnson, C. H., Austin, Minn 1884
Johnson, H. D., Charlottetown, P E I 1885
Johnson, James B., London, Eng 1876
Johnson, J. C., Surg. Maj. Army 1867
Johnson, J. R., Spring Valley, Minn 1883
Johnson, J. W, Farmersville, O 1887
Johnston, Thomas G., Sarnia, O 1871
Johnston, W. G., Montreal 1884
Jones, Charles R., Hatley, Q 1874
Jones, George N., Burlington, Iowa 1874
*Jones, Thomas W., (ad eun) 1854
*Jones, Jonathan C., 1865
Jones, Wm. Justus, Prescott, O 1856
Jones, A. J. M., Wabash Av., Chicago 1873
Josephs, G. E., Pembroke, O 1881
Kearney, W. J., Mariposa, Cal 1875
Keefer, Wm. N., B.A., Surg. Maj. Bengal Army 1869
*Keeler, Thomas, 1859
†Kelly, Clinton Wayne, Louisville, Ky 1867
Kelly, Patrick N., Rochester, Minn 1884
*Kelly, William, 1846
†Kelly, Thos., Omaha, Ne 1873
Kelly, J. A. A., Omaha, Ne 1887
Kempt, William, Lindsay, O 1864
Kennedy, J. H., Lindsay, O 1888
Kennedy, Richard A., Montreal 1864
Kennedy, R. A., B.A., Cumming's Brid., O 1886
Kenney, F. L., B.A., St. John, N B 1888
*Kerr, James, 1858
Killery, St. John, Surg. Maj. Army 1862
Kincaid, R. M., Clarenceville, Q 1888
King, Wm. M. H., St. Sylvestre, Q 1859
King, Reginald, A.D., Compton, Q 1868
King, Richard, Peterboro, O 1867
Kinloch, J A, Montreal 1886
*Kirkpatrick, A., 1856
Kirkpatrick, E. A., Kentville, N S 1886
Kirkpatrick, R. C., B.A., Montreal 1886
Kittson, Edmund G., Windsor, 1873
*Kittson, John G., 1869
Klock, Robert H., Portage du Fort, Q 1882
Klock, W. H., Aylmer, Q 1885
*Knowles, James A., 1886
*Kollmyer, Alex. H., 1856
Laberge, Ed., St. Philomene, Q 1856
Lafferty, A. M., Perth, O 1887
Lafleur Henri A., B.A., Montreal, 1887
Landor, Thomas H., C. P. R'y, O 1884
Lane, John A., 1887
Lang, C. L., Kalamazoo, Mich 1876
Lang, W. A., New Richland, Minn 1881
*Lang, Thomas D., 1866
Lang, W. M., St. Marys, O 1888
Langlois, O. X., Amherstburg, O 1875
*Langrell, Richard T., 1875
Larocque, A. B., Montreal 1847
Lathern, J. S, Halifax, N. S 1853
Laurin, Edgar J., Deer Lodge, Mon 1881
Law, D. W C. Bond Head, O 1863
Law, William K., Coleraine, Irel 1877
†Lawford, John B., London, Eng 1879
*Lawrence, Henry J. H., 1862
Leavitt, Julius, Melbourne, Q 1866
Leclere, George Montreal 1851
Leclair, Napoleon, Lancaster, O 1861
Lee, James C., 1858
*Lee, John Rolph, 1849
Lefebvre, John M., Granville, B.C 1879
Legault, D., Salaberry de Valleyfield, Q 1866
Lemoine, C., St. Pierre, Isle d'Orleans 1850
Lepailleur, Leonard, 1848
Leprohon, John L., Montreal 1843
Levi, Reuben, New York, U.S 1870
Lindsay, Heriot, St. Johns, Q 1861
*Lister, James, 1862
*Lloyd, H. W., 1879
*Loke, C. F. A., 1872
*Logan, David D., 1842
Logan, Robert, Iona, Mich 1880
*Logan, William, 1833
*Long, Alexander, 1844
Longley, Edmund, 1866
Longpré, Pierre F., Quebec 1848
Loring, J. Brow, 1883
Loucks, W. F., Stirling, O 1887
*Loupret, Andre, 1850
Loux, William, Russel, O 1870
*Loverin, Nelson, 1855
Lovett, William, Ayr, O 1876
*Lucas, T. D'Arcy, 1869
Lunam, H., B.A., Campbellton, N B 1881
Lundy, E. L., Surg. Maj. Army 1862
Lyford, Chas. C., Minneapolis, Minn 1879
Lyon, Arthur, Shawville, Q 1861
Mass, Rudolph J., Chicago, Ill 1880
*MacDiarmid, John D., 1847
MacDonald, Angus, St. Paul, Minn 1836
*MacDonald, Colin, 1853
MacDonald, R. T. E., Sutton, Q 1881
MacDonald, Roderick Æneas, Stoney Mountain, Man 1874
MacDonald, A. D., Wickham, N. B. 1887
MacDonell, Æneas, Ottawa 1849
MacDonell R. L., B.A., Montreal 1876
MacFarlane, Wm, Almonte, O 1869
Macfie, James, Fort Covington, N Y 1869
MacIntosh, Robert, Rapid City, NWT 1863
Mack, Francis Lewis, Amherstburg, O 1866
*Mackie, J. R., 1865
*Macklem, Samuel S., 1859
Maclean, Archibald, Sarnia, O 1867
*Macnabb, Francis A. M, 1870
Macneil, Alex., Kensington, P E I 1883
McArthur, Robert D., Chicago, Ill 1867
McArthur, John A., Port Elgin, O 1879
McArthur, J., Winnipeg 1885
McBain, John, Martintown, O 1874
McCallum, Duncan C., Montreal 1850
McCann, J. J., B. A., Hopkinton, Mass 1878
McCarthy, J. G., Sorel, Q 1883
McCarthy, W., Chicago, Ill 1866
McClure, W., B.A., Montreal 1884
McCollum, E. P., Duart, O 1886

*McConkey, T. C., 1872
McConnell, John B., Montreal 1873
*McCord, John D., 1864
McCorkill, R. K. C., East Farnham, Q 1882
McCormack, N., Pembroke, O 1885
McCormick, Andrew G., Richmond, Q 1874
McCrimmon, Donald A., Lucknow, O 1869
McCrimmon, John, Kincardine, O 1873
McCrimmon, Milton, Palermo, O 1878
McCuaig, W. J., San Francisco, Cal 1886
McCullough, George, St. Mary's, O 1879
*McCullough, Michael, [Hon.] 1843
McCully, Oscar J., M. A., Baie Verte, N B 1879
McCurdy, John, Chatham, N B 1866
McDermid, Wm. E., Dunvagan, O 1875
McDiarmid, Donald, Athol, O 1867
McDiarmid, James, Hensall, O 1873
McDonald, Alex., Paisley, O 1883
McDonald, H J., Alexandria, O
†McDonald, John A., Montreal 1880
McDonald, Jos. D. A., Acton Vale, Q 1873
McDonald, R. C., Spencer, Iowa 1880
*McDonald, Roderick, 1834
McDonald, Alex. R., Boyd, Wis 1882
McDonald, A. L., Glendonald, O 1887
McDonald, D.D., North Lancaster, O 1887
McDonnell, A. E. J., B.A., Morrisburg, O 1888
McDonnell, Alex. R., Alexandria, O 1874
McDonnell, Angus C., Montreal 1852
McDougall, D. S., Camlachie, O 1888
McDougall, Peter A., Ottawa, O 1864
*McDougall, Peter A., 1847
McEachran, Wm., Denver, Col 1880
McEwan, Finolay, Carleton Place, O 1870
McFarlane, M. A., Arnprior, O 1888
McGannon, E A., Brockville, O 1885
McCannon, M. C., Lowell, Mass 1881
McGannon, T. G., Prescott, O 1886
McGarry, James, Drummondville, Q 1857
McGeachy, William, Iona, O 1867
*McGill, William, 1848
*McGillivray, Donald, 1861
McGowan, Henry W., Beebe Plain, Q 1867
McGrath, Thomas, 1849
*McGregor, Duncan, 1861
McGuigan, W. J., London, O 1879
*McGuire, Bernard D., 1873
McIlmoyl, Henry A., Clayton, N Y 1876
McInerney, James P., Kingston, N B 1884
McInnes, Walter J., Victoria, O 1865
McIntyre, James Vankleek Hill, O 1859
McIntosh, Donald J., Vankleek Hill, O 1870
McIntyre, Peter A., Souris, P E I 1860
McKelcan, George Lloyd, Hamilton, O 1860
McKenzie, J. T., Plainfield, O 1884
McKenzie, B. E., B.A, Kingston Road, Toronto, O 1880
McKenzie, K. A. J., Portland, Oregon 1881
McKay, John, Woodville, O 1869
McKay, Walter, Courtland, O 1854
McKay, J. M., Wallace, N S 1886
McKinley, John K., Bristol, Q 1878
McKinnon, G. W., Sunnyside, P E I 1888
McKinnon, H., Alexandria, O 1887
McLaren, Peter, Brudenell, P E I 1869
McLaren, Peter, Paisley, O 1861
McLaren, Peter, Ormstown, Q 1872
McLaren, D. C., B.A., Galt, O 1880
*McLean, Alexander, 1860
McLean, J. W., Point Hastings, N S 1883
McLean, Thos. N., Fergus Falls, Minn 1882
McLean, J. M., B.A., Pictou, N S 1884
McLellan, Jas. A., Tignish, P E I 1884
McLennan, D., Dunegan, O 1888
*McLeod, Arch., B.A., 1883
McMartin, D. R., Toronto, O 1888
McLeod, James, Charlottetown, P E I 1873
McMeekin, J. W., Otter Lake, Mich 1865
McMicking George, Goderich, O 1851
McMillan, Æneas J., Manitou, Col 1874
McMillan, D. L., Alexandria, O 1885
McMillan, Louis J. A., Mansonville, Q 1860
McMillan, John, Pictou, N S 1857
McMurray, Samuel, 1841
*McNaughton, E. P., 1836
McNee, Stewart, Ripley, N Y 1879
McNeece, James, Montreal 1869
McNeil, Ernest, Vernon River, P E I 1870
McNulty, M., Brashers Falls, N Y 1880
McQuillen, James, Marquette, Mich 1874
*McRae, George, 1876
McTaggart, Alexander, London, O 1860
*McVean, John M., 1865
Madill, John, Alliston, O 1867
Maher, J. J. E., New York 1883
Major, George W., B.A., Montreal 1871
Malcolm, John Rolph, Scotland, O 1861
*Malhiot, Alfred, 1846
Malloch, Edward C., Ottawa, O 1863
*Malloch, William B., 1867
Mallory, Albert E., Warkworth, O 1872
Marceau, Louis T., Napierville, O 1872
Markell, Richard S., Cloverdale, Cal 1868
*Marr, Israel P., 1849
Marr, Walter H., W 33rd St. N. York 1859
Marston, Alonzo W., Hull, Q 1871
Marston, John J., U. S. Army 1863
Martel, Ovide, Montreal 1883
Mason, J. L., M.A., Brailsford, Derby, Eng. 1863
Mattice, Rich. J., Omaha, U S 1875
†Mathieson, John H., St. Mary's, O 1871
*Mathieson, Neil, 1870
Mayrand, William, St. Andrews, Q 1847
Meahan, J. C., Bathurst, N B 1884
Meane, John, Staff Srg. Maj. Army 1869
Meek, Jas. A., 20 W 25th St. New York 1875
*Meigs, Malcolm R., 1865
Menzies, John R., Ft. Gratiot, Mich 1879
*Meredith, Thomas L. B., 1842
Merritt, D. P., B.A., Fitzroy Harbor, O 1884
Metcalfe, F T., Buffalo, N Y 1888
Metcalfe, Henry J., Thurso, Q 1876
Mewburn, F. H., Galt Mines, N W T 1881
Mignault, Henry A., St. Denis, Q 1860
Mignault, L. D., B.A., Montreal 1880
Miller, R., Surg. N. W. Mounted Police, Battleford, N W T 1870
Mills, Thos. W., M.A., Montreal 1878
Miner, Frank L., Abercorn, Q 1877
*Mines, William W., 1874
Mitchell, Fred. H., London, O 1878
Moffatt, John Edw., Staff Surg. Army 1861
Moffatt, R D, West Winchester O 1888
Moffatt, Walter, Pensacola, Fla 1852
Molson, Wm. A., Montreal 1874
Mongenais, Napoleon, Rigaud, Q 1865
Monk, George H, Dillonton, Q 1875
Moore, Charles S., London, O 1874
Moore, Jehiel T., Tilsonburg, O 1874
Moore, Joseph, 1852
Moore, Richard, 1853

Moore, Robert C., St. Paul, Minn 1869
Moore, William, Algonac, Mich 1881
Morgan, V. H., Aultsville, O 1887
*Morin, Jos. L. (Hon.), 1859
*Morrison, David R., 1869
Morrison, John, M.A., Waddington, N Y 1872
Morrow, C., Vernon, O 1888
Mount, John W., Montreal 1851
Munro, Alexander, Montreal 1876
Munro, James T., Dominionville, O 1872
Muckey, F. S., St. Paul, Minn 1883
*Murray, Charles H., B.A., 1876
Murray, D., Campbellton, N B 1886
Musgrove, W. J., W. Winchester. O 1882
Neilson, W. J., Winnipeg, Man 1878
Nelles, J. M., Canton, Ill 1875
Nelles, John A., London, O 1850
*Nelson, Horace, 1851
*Nelson, Wolfred (Hon.), 1848
Nelson, Wolfred D E., Panama, C A 1872
Nelson, W. M. F., Montreal 1884
Nesbitt, Jas. A., Salt Lake City, Utah 1868
Nicol, Wm. R , Watkins, N Y 1872
*Nicholls, Cns. R., 1862
Norman, T. J., Schonberg, O 1887
Norton, Thos., Horning's Mills, O 1874
Oakley, Wm. D., Streetsville, O 1877
O'Brien, Thos. B. P., Srg. Maj. Army 1862
O'Brien, Robert S., Nanaimo, B C 1873
O'Brien, David. Renfrew, O 1873
O'Brien, T. J. P., Kansas City, Mo 1882
O'Brien, Timothy, Brudenell, O 1884
O'Callaghan, Cornelius H., 1854
O'Callaghan, T. A., B.A., Worcester, Mass 1880
*O'Garr, Peter, 1857
*O'Connor, Daniel A., 1867
O'Dea, James J., Stapleton, Staten Island, N Y 1856
Odell, William, 1849
O'Keefe, Henry, Minto, Dak 1882
Ogden, H. T., B.A , Milwaukee, Wis 1882
O'Leary, James, St. Pascal, Q 1866
O'Leary, Patrick, Mayo, Q 1859
Oliver, James W., Clifton, O 1868
O'Reilly, Charles, Toronto, O 1867
Orr, A. E., Cookshire, Q 1888
Orr, J. E., Montreal, Q 1888
Orton, T. H., Hamilton, O 1886
Osborne, A. B., Hamilton, O 1886
Osler, Wm., 131 S 15th St, Philadelphia 1872
Palmer, G. F., Ottawa 1885
*Padfield, Charles W., 1868
Painchaud, Edw. S. L., Varennes, Q 1848
Pallen, Montrose A., New York 1864
Palmer, Loran L., Toronto 1866
*Paquin, Jean M., 1843
*Paradis, Henri, 1846
*Paradis, Pierre E., 1867
*Park, George A., 1877
Park, P. C., Durham, O 1888
Parke, Charles S., 1866
Parker, Rufus S., Canton, Mass 1866
*Patterson, James M., 1855
Paterson James, Winnipeg, Man 1864
*Pattee, George, 1858
Pattee, Richard P., Plantagenet, O 1874
*Patton, Edward K., 1867
Pearman, H. V., Halifax, N S 1888
Pegg, Austin J., Ossian, Iowa 1872
Pegg, Charles H., Chicago, Ill 1867
Perks, W. C., Woodstock, O 1881
Perrault, Victor, St. Eustache, Q 1852
Perrier, John, Cleveland, Ohio 1868
Perrigo, James, M.A., Montreal 1879
Perry, H. R., Coteau Landing, Q 1873
Phelan, C. J. R , Waterloo, Q 1865
Phelan, James B., Chicago, Ill 1874
*Phelan, Joseph P., 1854
Philip, David L., Brantford, O 1863
Phippen, S. S. C., Owosso, Mich 1883
*Picault, Charles, 1857
Pickup, John W., Brockville, O 1867
Pinsonneault, B., Chicago, Ill 1880
*Pinet, Alexis, 1840
Pinet, Alex. R., St. Laurent, Q 1864
Pomeroy, L. E. Mc., B.A., Tweed, O 1886
Poole, Alfred, Montreal 1886
Poole, H. E., Rossie, N Y 1880
Porteous, Wm., Montreal 1884
Porter, J. A., B.A., Powassan Station, O 1887
Pothier, J. C , Woonsocket, R I 1857
Potts, J. M., Belleville, O 1888
Poussette, A. Courthorpe, Sarnia, O 1860
Powell, F. H., Ottawa 1885
Powell, Israel Wood, Victoria, B C 1860
Powell, Newton W. Cobourg, O 1850
†Powell, Robert H. W., Ottawa 1876
Powers, Geo. W., Eaton Corners, Q 1861
Powers, Lafontaine B., Port Hope, O 1867
Pringle, George, Cornwall, O 1855
Pringle, A. F., Northfield, Minn 1880
Pringle, W. R., Cornwall, O 1886
Prosser, W. O., Le Mars, Ply Co., Iowa 1874
Proudfoot, John S., Suspension Bridge, O 1868
Proudfoot, Alex., Montreal 1868
Proulx, Phileas, Montreal 1844
*Prevost, E. Gilbert, 1859
Pulford, F. W., Stonewall, Man 1880
*Quarry, James J., 1868
*Quesnel, Jules M., 1849
Quirk, E. L., Aylmer, Q 1888
Rae, J. Hamilton (Hon.), London, Eng 1853
*Rainville, Pierre, 1863
Rambault, J., Dep. Insp. Gen. Army 1859
*Rattray, Charles J., 1871
Rattray, James C , Cobden, O 1874
Raymond, Olivier, Montreal 1850
Raymond, Alf., Moulinette, Q 1886
Raymond, G. H., B.A., Springfield, N B 1886
Read, Herbert H., Halifax, N S 1861
Reavely E., Port Robinson, O 1887
Redner, Horace P., Lonsdale, O 1864
Reddick, Robert, West Winchester, O 1874
Reddy, Herbert A., B.A., Montreal 1876
*Reddy, John (ad eun), 1856
Reed, Thomas D., Montreal 1871
Reed, John A., Sault Ste. Marie, O 1871
Reid, Alex. Peter, Halifax, N S 1858
*Reid, Kenneth, 1864
Renner, W. Scott, Jordan Station, O 1884
Reynolds, T. W., Hamilton, O 1881
Reynolds, Robert T., Berlin, O 1838
*Reynolds, Thomas, 1841
Richard, Marcel, Manchester, N H 1864
Richardson, G. C., South March, O 1887
Richmond, P. E., Mt. Pleasant, Minn 1873
Ridley, Henry Thomas, Hamilton, O 1852
*Rielle, Etienne R. E., 1857
Riley, Oscar H., Morris Junct., Clinton Co., N Y 1879
Rinfret, Ferdinand R., Quebec 1868

*Rintoul, David M., 1854
Richardson, J. R., Archer av., Chicago 1865
Riordon, B. L., Toronto, O 1880
Ritchie, A. F. B.A., Duluth, Minn 1876
Ritchie, John L., Army Med. Dept. 1874
*Roberts, Edward T., 1859
Roberts John E., B.A., Montague, Jam., W I 1867
Robertson, A. G., Iroquois, O 1888
Robertson, A. M., 1885
Robertson, James E., Montague, P E I 1865
Robertson, David, Milton, Q 1864
Robertson, David T., Lennoxville, Q 1857
Robertson, Patrick, St. Andrews, O 1867
Robertson, F. D., B.A., Lennoxville, Q 1886
Robillard, Adolphe, Ottawa 1860
Robinson, Stephen J., Brantford, O 1867
Robinson, Wesley, Markham, O 1877
Robitaille, Louis, New Carlisle, Q 1866
Robitaille, L. T., Quebec 1858
†Roddick, Thomas G., Montreal 1868
Rodger, Thomas A., Montreal 1869
Rogers, E. J. A., Denver, Col 1881
Rogers, Amos, Ottawa 1874
Rooney, R. F., Auburn, Placer Co., Cal 1870
Ross, D. L., Decateur, Ala 1887
†Ross, George, M.A., Montreal 1866
Ross, G. T., Montreal 1880
*Ross, Henry, 1872
†Ross, James, B.A., Dundas, O 1881
Ross, J. W., Cohoes, N Y 1881
Ross, L. D., Montreal, Q 1884
Ross, L. F., B.A., Montreal 1886
Ross, Thomas, 1863
Ross, William G., Ashburt, New Z 1871
*Ross, Wm. D., 1875
Ross, W. K., Goderich, O 1883
Rowatt, W. M., Manotick, O 1886
Rowell, G. B., Montreal 1884
Rugg, Henry C., Perth, O 1865
*Rumsey, William, 1859
Rutherford, M. C., Fergus Falls, Minn 1879
Rutherford, Clarendon, M.A., Chicago 1882
Rutledge, And. J., Manitoba 1883
Ruttan, Allan, Napanee, O 1852
Ruttan, A. M., New York 1880
Ruttan, R. F., Montreal 1884
*Sabourin, Moise, 1849
Sampson, James (Hon.), 1847
Sanderson, George W., Toronto, O 1850
Savage, Thos. Y., Thistletown, O 1854
*Savage, Alex. C., 1866
*Sawyer, James H., 1863
*Schmidt, Samuel B., 1847
Schmidt, A. F., Montreal 1886
Schmidt, A. J., Faribault, Minn 1886
*Schofield, David T., 1854
Scott, John G., Hazeldean, Co. Carlt., O 1879
Scott, Stephen A., 1854
*Scott, William E., 1844
Scott, Wm. F., Hull, Q 1875
Scott, W. McE., Winnipeg, Man 1883
Scott, J. M., Philadelphia, Penn 1887
*Scriven, George Augustus, 1846
Scully, D. J., Lindsay, O 1887
Seager, Francis R., Brigden, O 1870
Secord, Levi, Bright, O 1876
Seery, F. J., Fredericton, N B 1886
Setree, Edward W., Heuvelton, N Y 1878
Séguin, André, Rigaud, Q 1848
Senkler, A. E., St. Paul, Minn 1863
Serviss, T. W., Selina, Frisco Co., Cal 1883
Seymour, M. M., Winnipeg, Man 1879
*Sewell, Stephen C. (ad eun), 1841
Sewell, Colin (ad eun), Quebec 1869
Shanks, J. C., Howick, Q 1881
Sharp J. C., Marysville, N B 1885
Sharp, Wm., South Toledo, Ohio 1872
Shaw, Alexander, Watertown, Dak 1882
Shaw, W. F., Bracebridge, O 1879
Shaver, Peter Rolph, Stratford, O 1854
Shaver, W. H., Wales, O 1883
*Shaver, R. N., 1857
Shibley, J. L., B.A., Yarker, O 1858
Shepherd, Francis J., Montreal 1873
Sherk, George, Cheapside, O 1865
Shoebottom, Henry, Port Huron, Mich 1857
Shufelt, W. A., 250 W. 11th St., N York 1881
Sihler, G. A., Simcoe, O 1883
*Simard, Amable, 1852
Simpson, Thomas, Montreal 1854
Sinclair, Coll, Aylmer, O 1874
Sinclair, Duncan Robertson, Pembina, Dakota 1884
Small, H. B., Ottawa 1880
*Smallwood, John R., 1868
Smellie, T. S. J., M.A., Pr. Arthur's Landing 1877
Smiley, J. S., Portsmouth, Iowa 1880
*Smith, Daniel D., 1868
Smith, Daniel F., Walkerton, O 1878
Smith, E. H., 2700 Wentworth Ave, Chicago 1885
Smith, E. H., Fullarton, Neb 1881
*Smith, Edward W., 1859
Smith, John, Portland, Oregon 1879
Smith, Norman A., Frelighsburg, Q 1870
Smith, Wm., Lachute, Q 1879
Smith, Edward W., A.B., West Meriden, Conn 1882
Smith, W. A. de W., Montreal 1884
Smyth, H. E., Marlborough, Mass 1885
Smythe, T. W., Colonel 100th Rgt., Dover, Eng 1848
Snider, Frederick S., Teeterville, O 1876
Sparham, Terence, Brockville, O 1841
Sparham, E. R., 1852
Spear, Andrew M., Danville, Q 1874
Spencer, R., Brandon, Man 1879
Springle, J. A., Montreal, Q 1888
*Squire, Wm. Wood, M.A., 1878
Stafford, Fred. J., Little Bay, Nfld 1878
Stanton, George, Simcoe, O 1868
Stark, George A., Milwaukee, Wis 1872
*Staunton, Andrew, 1846
*Stephen, W., 1881
Stephens G. C., Montreal, Q 1887
Stephens, Alex. D., Durham, Q 1857
Stevenson, Charles N., Coaticook, Q 1876
Stevenson, Hans, Wakefield, Q 1880
Stevenson, J. M., Bryanston, O 1856
*Stevenson, John L., 1855
*Stevenson, John A., 1873
Stevenson, Robert A., Strathroy, O 1871
Stewart, Alexander, Palmerston, O 1872
Stewart, Andrew, 1884
Stewart, A. D., Richmond, Q 1888
*Stewart, John Alexander, 1862
Stewart, James, Montreal 1869
Stewart, W. G., B.A., Montreal, Q 1888
Stewart, J. O., 1880
Stephenson, James, Iroquois, O 1850

Stimpson, Alfred O., Thompson, Pa 1863
St. John, Leonard, Chicago, Ill 1872
Storrs, A , Mexborough, York, Eng 1876
*Strobridge, James Gordon 1862
Struthers, A. D., Frelighsburg, Q 1881
Struthers, B. R., Rochester, Minn 1883
Stroud, C. S., Norway, Benton Co., Iowa 1876
*Sutherland, Fred. Dunbar, 1864
Sutherland, Walter, Ormstown, Q 1871
*Sutherland, Wm., 1836
*Sutherland, Wm , 1870
Sutherland, Wm. R., Montreal 1879
Switzer, Egerton R., Salina, Ks 1865
Tabb, Silas E., M.A., Sherbrooke, Q 1868
*Tait, Henry Thomas 1860
Taylor, Wm. H., Peterboro, O 1859
Taylor, Sullivan A., Gilmonton, N H 1870
Tew, H. S., Wakefield, York, Eng 1864
Temple, James A., Toronto 1865
Thayer, Linus O., Montreal 1859
*Theriault, F. D., 1883
Therrien, Honoré, Bedford, Q 1863
Thomas, W. R., Elkhart, Man 1886
Thompson, J. H., Ganauoque, O 1888
*Thompson, James, 1842
Thompson, Robert, Brantford, O 1852
Thompson, Wm. E., Mattawa, O 1882
Thornton, Hastwell W., B.A., New Richmond, Q 1882
Tracy, A. W., West Meriden, Conn 1873
Trapnell, H. E., Harbour Grace, Nfd 1887
Trenholme, Edward Henry, Montreal 1862
*Trudel, Eugene H., 1844
Trueman, J. E., Macan, N S 1881
*Turgeon, Louis G., 1860
Turnbull, R., Fort McLeod, N W T 1886
Tuzo, Henry A., 1853
†Tunstall, Simon J., B.A., Litton, B C 1875
Usher, Henry, Walkerton, O 1861
Vannorman, J. M., Detroit, Mich 1850
*Vercoe, Henry L , 1865
*Vicat, John R., 1867
†Vineberg, Hiram N., New York 1878
Wagner, A. Dixon, Cornwall, O 1872
Wagner, G. C., Dickinson's Landing, O 1881
*Wagner, Wm. H., 1844
Wakeman, William, Quebec 1866
Wales, Benjamain N., Robinson, Q 1874
*Walker, Robert, 1851
Walker, Felix D., Launching, P E I 1884
Wallace, Isaac U., Milton, Q 1874
Walsh, Edmond C., Madrid, N Y 1866
Walton, George O., Barbadoes, 1873
Wanless, John R., Dunedin, New Z 1867
Ward, William T., Morristown, Minn 1873
Ward, Michael O'B., Panama, 1875
Warneford, P. H., Norton, N B 1887
Warren, Frank, Brooklin, O 1872
*Warren, Henry, 1860
Waugh, William, London, O 1872
Weagant, A. A., Hosaie, O 1838

Weagant, C. A., Collon. Cal 1879
*Webb, James T. S., Montreal 1871
Webster, Arthur D., Edinburg, S 1873
Weilbrenner, Remi, Port Neuf, Q 1851
*Weir, Richard, 1852
Westley, R. A., Lancaster, O 1888
Wetmore, T. H., Bloomfield, N B 1888
*Wherry, John, 1862
White, F. J., Greenspound, Nfld 1886
White, W. W., M.A., St. Johns, N B 1886
Whitecomb, Josiah G., Omaha 1848
*Whiteford, James W., 1873
Whiteford, Richard, Toledo, Ohio 1857
Whitwell, W. P. O., Philipsburg, Q 1860
*Whyte, Joseph A., 1870
Wigle, Hiram, Wiarton, O 1875
*Widner, Christopher [Hon.] 1847
*Wilcox. Marshall B., 1868
Wilkins, George(ad eun), Montreal 1886
Wilkins, H. P. Toronto, O 1887
Williams, J., Boston, Mass 1881
Williams, J. F., Gravenhurst, O 1885
Williams, E. P., Ottawa, O 1887
Williston, H. V., M.A., Newcastle, N B 1879
Wilson, J. A. K., Manotick 1885
Wilson, Benjamin S., Belleville, O 1866
*Wilson, Robert M., 1850
Wilson, William, Ottawa 1857
Wilson, Samuel F., Millstream, Kings Co., N B 1884
Wilson, C. W., Cumberland, O 1886
*Wilscam, John Wilbrod, 1846
Wishart, D. G., Madoc, O 1885
Wolverton, Algernon, M.A., Hamilton, O 1868
Woods, David, Staff Surgeon Army 1860
†Wood, Edwin Geo., Londsboro, O 1885
Wood, George C., 1845
Wood, George, Faribault, Minn 1863
Wood, Ed. S., Faribault, Minn 1883
Wood, Hannibal W., Knowlton, Q 1865
Woodruff, T. A., St. Catherines, O 1888
Woods, Jno. J. E., Aylmer, Q 1875
Woodiul, Sam. Pratt., Surg. Maj. 1864
Woolway, C. J., Copper Falls, Mich 1875
*Workman, Benjamin, 1853
Workman, Joseph, Toronto 1835
Worthington, A. N., Montreal 1866
Worthington, Edward [ad eun] Sherbrooke, Q 1868
Wright, John W., B.A., Picton, O 1878
Wright, Henry P., Ottawa 1873
Wright, Stephen, Ottawa, O 1859
Wright, William, Montreal 1848
Wye, John H., 26 Farrington sq., London 1868
Wylde, C. F., Halifax, N S 1888
Young, Philip R., Clarenceville, Q 1876
Young, Robert C., Ridgetown, O 1873
Young A. A., Barton, Vt. 1887
Young, H. E., B.A., Napanee, O 1888
Youker, William, Belleville O 1870

*Deceased.

†Medalist.

MASTERS OF ARTS.

(For Addresses, see Lists of Bachelors of Arts and of Applied Science.)

Allworth, Rev. John B.A. 1875
Amaron, Rev. Calvin E., B.A. 1880
Ami, Henry Mark, B.A. 1885
Archibald, John S., B.A. 1877
*Bancroft, Rev. Charles (ad eun) 1856
Bancroft, Rev. C., B.A. 1870
Baynes, Donald, B.A. 1867
Bethune, Meredith Blenkarne, B.A. 1869
*Bothwell, John A., B.A. 1868
Bowan, Wm. M. (Hon.) 1859
Boyd, John, B.A. 1864
*Butler, Rev. John (Hon.) 1852
Cameron, Rev. James, B.A. 1874
Carmichael, Rev. J. B., B.A. 1871
Chamberlin, Browne, B.C.L. (ad eun) 1857
Chandler, George H., B.A. 1879
Chapman, Rev. Charles, M.A., London Univ. (ad eun) 1872
Clarke, Wallace, B.A., M.D. 1872
Clowe, John D., B.A. 1874
Cornish, Rev. George, B.A. 1963
Craig, James A., B.A. 1883
Crothers, Rev. Wm. J., B.A. 1875
Cunningham, Rev. Thos. E., B.A. 1883
*Cushing, Lemuel, B.A., B.C.L. 1867
Dart, Wm. J., B.A. 1874
Darey, J. Herbert, B.A. 1885
Davidson, Rev. James, B.A. 1866
Davidson, Charles P., B.A., B.C.L. 1867
Davidson, Leonidas H., B.A. 1867
Dawson, Rankine, B.A., M.D. 1882
Dawson, Wm. B., B.A. 1879
Dey, Rev. William J., B.A. 1875
Dewey, Finley McN., B.A. 1882
DeWitt, Caleb J., B.A. 1864
Dickson George, M.A., Victoria Col. (ad eun) 1879
Donald, James T., B.A. 1882
Dougall, John Redpath, B.A. 1867
Duff, Rev. Archibald, B.A. 1867
Duncan, Alexander E., B.A. 1875
Ells, Robert, B.A. 1875
Empson, Rev. John, B.A. 1879
Forneret, Rev. George A., B.A. 1880
*Gibb, George D., M.D. (Hon.) 1856
Gibson, Thos. A (Hon.) 1856
Gilman, Francis E., B.A. 1865
Gould, Edwin, B.A. 1860
Graham, John H. (Hon.) 1859
Green, Joseph, B.A. 1864
*Haight, Fred. S., M.A., Williams Col. (ad eun) 1882
Hall, Rev. Wm., B.A. 1867
Hart, Lewis A., B.A. 1869
*Hicks, Frank W., B.A. 1870
Hindley, Rev. John, B.A. 1873
Howe, Henry Aspinwall (Hon.) 1855
Jones, Montgomery, B.A. 1873
Kahler, Frederick A., B.A. 1872
Keays, Chas. H., B.A. 1883
*Kemp, Rev. Alex. F. (Hon.) 1863
Kennedy, George. T., B.A. 1872
Kennedy, Rev. John, B.A. 1860
Kirby, James, B.A., B.C.L. 1862
Krans, Rev. Edward H., B.A. 1875
Lafleur, Paul T., B.A. 1887
Laing, Rev. Robert, B.A. 1877
*Leach, Robert A., B.A., B.C.L. 1869
Lighthall, Wm. Douw., B.A., B.C.L. 1885
Lyman, A. Clarence, B.A. 1881
Lyman, Henry H., B.A. 1880
Macfarlane, James A., B.A. 1888
MacFee, Kutusoff, N., B.A. 1888
McCord, David R., B.A., B.C.L. 1867
McGregor, Rev. Duncan, B.A. 1874
McGregor, James, B.A. 1868
*McIntosh, John, B.A. 1878
McLaren, John R., B.A. 1868
McLennan, Rev Duncan H., B.A. 1875
Markgraf, Charles F. A. (Hon.) 1865
Mason, James L., B.A. 1868
Mattice, Corydon J., B.A. 1862
Morin, Jooseph L., B.A. 1886
Morris, Alex., B.A., B.C.L. 1852
Morrison, Rev. James D., B.A. 1868
Morrisson, John, B.A. 1870
Munro, Rev. Gustavus, B.A. 1874
Naylor, W. H., B.A. 1885
Newnham, Rev. Jarvois A., B.A. 1883
*Perkins, John, B.A. 1862
Perrigo, James, B.A. 1869
*Plimsoll, Reginald J., B.A. 1867
*Ramsay, Robert A., B.A., B.C.L. 1867
Robins, Sampson Paul, B.A. 1868
*Rodger, David (Hon.) 1856
RRoss, Geo., B.A., D. 1866
Roy, Rev. James, M.A., Victoria Col. (ad eun) 1879
Scrimger, Rev. John, M.A., Toronto University (ad eun) 1884
Shaw, Rev. W. J., M.A., Victoria Col. (ad eun) 1880
*Stewart, Rev. Colin Campbell, B.A. 1870
Sweeney, James F., B.A. 1881
Tabb, Silas Everett, B.A. 1869
Taylor, Rev. Ernest M., B.A. 1882
Thompson, George J. A., B.A. 1888
Thorburn, John (Hon.) 1861
Trenholme, Norman W., B.A., B.C.L. 1878
Torrance, Rev. Edward F., B.A. 1874
Wallace, Rev. R. W., B.A. 1875
Ward, George B., B.A. 1883
Whillans, Rev. Robert, B.A. 1883
White, Wm. J., B.A., B.C.L. 1886
Wicksteed, Rich. J., B.A., B.C.L. 1866
*Wilkie, Daniel (Hon.) 1869
Wilson, John, B.A. 1870
Wotherspoon, Ivan Tolkein, B.A. 1869

* Deceased.

MASTERS OF ENGINEERING.

Dawson, William B., B.A., B.A.Sc. 1880
McLeod, Clement H., B.A.Sc. 1878
Sproule, W. J., B.A.Sc. 1887
Waddell, J. A. L., B.A.Sc. (ad eun) 1882

MASTERS OF APPLIED SCIENCE.

Adams, Frank, B.A.Sc 1884
Thompson, Wm. T., B.A.Sc 1882
Wardrop, Norval, B.A.Sc 1884

BACHELORS OF CIVIL LAW.

*Abbott, Christopher C 1850
Abbott, Harry, 11 Hospital St., Montreal 1878
Abbott, John J. C., 11 Hospital St., Montreal 1854
Abbott, John B., 11 Hospital St., Montreal 1874
Adam, Joseph, 38 St. James St., Montreal 1878
Adams, Abel, Montreal, Q 1867
Allan, Irvine 1882
Alguire, J. C., Montreal 1880
‡Archibald, John Sprott, M.A., 181 St. James St., Montreal 1880
Archambault, Henri 1874
Archambault, Jos. L. C., 488 Craig St., Montreal 1871
Armstrong, Louis, 11 St. James St., Montreal 1861
Ascher, sidore G., Montreal 1863
‡Atwater, Albert W., Montreal 1880
Austin, Joseph E., Montreal 1880
Aylen, John, M D., Aylmer, Q 1861
Aylen, Peter, B.A 1854
Aylmer, Henry, Hon., jun., Melbourne, Q 1881
*Badgley, Frank H 1852
Bagg, Robert Stanley Clark, 19 St. James St., Montreal 1871
Bampton, George E., Lachute 1879
Baril, Joseph, Montreal 1884
Barnard, Arch. E., Montreal 1882
Barnston, John G., anitoba 1856
Barry, Denis, 6 St. James St, Montreal 1872
Baynes, Edward Alfred, Montreal 1867
Baynes, O'Hara, Montreal 1874
Beaudin, Simeon, 44 St. Vincent St., Montreal 1878
Beauchamp, Joseph, 89 St. James St., Montreal 1878
Beaudet, Omer, Lotbinière, Q 1882
Bergeron, Horace, Beauharnois, Q 1877
*Benjamin, Lewis N., Montreal 1863
Beaubien, Nap. H., Yamachiche, Q 1877
Beauregard, Henri A., St Hyacinthe, O. 1887
Berthelot, Louis H., 7 Beaver Hall Sq., Montreal 1878
Berthelot, Jos. B., Montreal 1880
‡Bethune, Meredith B., M.A., 11 St. Sacrament St., Montreal 1869
Birny, Jean B. S., Montreal 1880
Bisaillon, Francois Joseph, 11 Place d'Armes Hill, Montreal 1876
Bissonnette, Louis A., 36 St. Vincent St., Montreal 1878
*‡Bothwell, John A., B.A 1869
Bouthillier, Charles F., 57 Union avenue, Montreal 1867
Boyd, John, B.A., Toronto 1864
Bowie, Duncan E., Montreal 1873
Brakenridge, James W., Montreal 1880
Branchaud, Athanase, 3 Place d'Armes Hill, Montreal 1862
Brooke, C. J., 58 St. François Xavier St., Montreal 1878
Brooke, George H., Aylmer, Richmond, Q 1882
‡Brown, Albert J., B A, Montreal 1886
Buchan, John S., St. Andrews, Q 1884
Budden, Hanbury A., Montreal 1888
Bullock, Wm. E., B.A 1863
Burroughs, Wm. H., Montreal 1887
Buie, Hector, Montreal 1887
Busteed, E. B., 273 Bleury St., Montreal 1879
Butler, Thomas P., Montreal 1865
Cameron, John D., B.A., Dewittville, Q. 1885
Capsey, George, Bedford, Q 1877
Calder, John, 67 St. Sulpice St., Montreal 1871
Carden, Henry 1860
Caron, Sir Adolphe P., Quebec 1865
Carter, Christopher B., 103 St. François Xavier St., Montreal 1866
*Carter, Edward, Q.C., Montreal 1864
Carter, Geo. F., 31 Cadieux St., Montreal 1870
Chamberlin, Brown, Ottawa 1850
Chamberlain, John, jun 1807
Chambers, A. Busteed, Napanee 1875
Charland, Alfred 1863
Charette, Pierre P., Montreal 1877
Chauret, Amédée, Montreal 1873
Chauveau, Alexandre, Quebec 1867
Choquette, Frs. X 1874
Choquet, Ambroise, 42 St. Sulpice St., Montreal 1865
Claxton, Albert G. B., Montreal 1885
Cloran, Henry Joseph, Montreal 1882
Conroy, Robert Hughes, Aylmer, Q 1869
Cooke, Joseph P., Montreal 1880
Cooke, Geo. F., B.A 1884
Cornell, Z. E., Montreal 1879
Couillard, Edouard, 56 St. Gabriel St., Montreal 1875
Couillard, Jean B 1866
Coutlée, Lewis W. P., Hull, Q 1873
Cowan, Robert C., 235 St. James St., Montreal 1862
Crankshaw, James, Montreal 1882
Creighton, J. G, Aylwin, Ottawa 1880
*Crimmon, W J 1878
Cross, A. S., St. James St., Montreal 1878
Cross, Alexander, Ormstown, Q 1881
Cross, Wm. Heber, Montreal 1882
Crothers, Robert A., B.A., Bedford, Q... 1878
Cruikshank, Wm. G., 60 St. James St., Montreal 1872
Cullen, James, Montreal 1884
Curran, Joseph J., Montreal 1862
Cushing, Chs., 110 St. James St., Montreal .. 1869
*Cushing, Lemuel, jun., M.A 1865
Daly, J. C 1858
Dansereau, Arthur, Montreal 1865
Dansereau, Clement, 62 St. Hubert St., Montreal 1877

Darby, Daniel, Waterloo 1870
Darey, Pierre J., M.A., Montreal 1868
David, Alphonse, Montreal 1882
Davidson, Chas. P., M.A., 182 St. James St., Montreal 1863
Davidson, Leonidas Heber, M.A., 217 St. James St., Montreal 1864
Day, Edmund T., 1592 Notre Dame St., Montreal 1863
DeBeaumont, Alfred L., Montreal 1880
De ary, A deric, 188 St. Denis St., Montreal 1879
Demers, Jean Baptiste, Montreal 1883
DeMartigny, Charles L., Montreal 1880
DeMartigny, Alphonse L., Varennes, Q. .. 1881
Desaulniers, Alexis L 1861
Desaulniers, Henri Lesieur, Montreal 1864
Desau niers, Dionis, 223 Notre Dame St., Montreal 1876
Desmarais, Odilon, St. Hyacinthe 1876
DesRivières, Rodolphe, 15 St Vincent St., Montreal 1875
Desrochers, Jean L. B 1863
Desrosiers, Joseph, 221 St. Lawrence St., Montreal 1873
Dickson, W. E., Montreal 1883
Doak, George O., Coaticook, Q 1863
‡Doherty, Chs. J., 13 Hospital St., Montreal 1876
Doherty, Thomas J., Montreal 1863
Dorion, Adélard A. L., 160 Notre Dame St., Montreal 1862
Dorion, Louis C. W., 24 St. James St., Montreal 1877
Doré, Pierre J , Laprairie 1880
*Doutre, Gonzalve 1861
Doutre, Pierre 1858
Downie, D., Montreal 1880
Driscoll, Netterville H., 64 St. James St., Montreal 1861
*Drummond, Wm. D 1867
Dubuc, Joseph, Man toba 1869
Duchesnay, Henry J. T., Beauce, Q 1866
‡Duclos, Charles A., B.A., Montreal 1884
Duffett, Henry J., B.A., Megantic, Q. ... 1865
Duffy, Henry T., B.A., Sweetsburg, Q 1878
Duhiz, John T., Quebec 1882
Dugas, François O., Montreal 1880
Duncan, Alexander E., B.A., Montreal .. 1879
Dunlop, John, 102 St. François Xavier St., Montreal 1869
Dunton, Robert A., Montreal 1888
Dupras, Pierre N 1866
Durand, Nephtalie, 61 St. Sulpice St., Montreal 1864
Elliot, Raleigh J., Montreal 18 6
Ethier, Léandre, 352½ Lagauchetière St., Montreal 1879
Ethier, Marc, 25 St. Gabriel St., Montreal 1877
Fair, John, jun., Montreal 1883
Falconer, Alex., B.A., Montreal 1884
Faribault, Joseph E., L'Assomption, Q... 1878
Farmer, Wm. O., Montreal 1866
Fay, John E., Knowlton, Q 1878
Ferguson, John, St. Anicet, Q 1888
Fisher, Roswell C., Montreal 1869
Fisk, John J., Coaticooke 1868
Fleet, Chas. J., B.A., Montreal 1879
Foran, Thomas P 1870
Forget, Adélard, 64 St. Gabriel St., Montreal 1877
Forster, Joseph L., Montreal 1881
Foster, George G., Knowlton, Q 1881
Franks, Albert W 1871
Fry, Henry, Montreal 1888
*Gairdner, Wm. F 1856
Galarneau, Joseph Antoine 1864
Galbraith, Wm., Orillia, O 1875
Garon, Alphonse B 1882
Gaudet, Oscar, 160 Notre Dame St., Montreal 1878
Gauthier, Antoine N., Sault au Recollet, Q.. 1881
Gauthier, D. Z., Sorel, Q 1859
Gelinas, A., Manitoba 1879
Geoffrion, Christopher A., 40 St. James St., Montreal 1863
Gibb, James R., Montreal 1868
Gilman, Francis E., M.A., 138 St. James St., Montreal 1865
Girard, Alfred C., Marieville 1882
Girouard, Désiré, 56 St. Francois Xavier St., Montreal 1860
Glass James M., 62 St. Francois Xavier St., Montreal 1877
‡Goldstein, Maxwell, Montreal 1876
‡Gordon, Asa, Aylmer, Q 1802
Gosselin, Jean, Quebec 1877
‡Goodhue, Henry S. W., Buenos-Ayres, Invadavio 1877
Goyette, Henri A., Beauharnois, Q 1880
Grahame, Dugald, 1134 Dorchester St., Montreal 1883
‡Greenshields, James N., 102 St. Francois Xavier St., Montreal 1876
Greenshields, Robert A. E., B.A., Montreal 1885
Grenier, Amédée L. W 1863
Guertin, Alfred L., Montreal 1882
Guerin, Edmund W. P., B.A., Montreal. 1881
Hackett, Michael F., Stanstead, Q 1874
Hague, Frederick, Montreal 1883
Hague, Henry J., B.A., Montreal 1885
Hall, John S., B A., 131 St. James St., Montreal 1875
*Hall, William A 1863
Hammond, Henry R., Chatham 1880
Harnett, Wm. de Courcy, Montreal 1870
Hart, Lewis A., M.A., 194 St. James St., Montreal 1869
Hemming, Edward J., Arthabaska 1855
‡Hodge, David W. R., B.A., Sherbrooke, Q 1874
Holton, Edw., 138 St. James St., Montreal 1856
*Houghton, John G. K 1863
Howard, Rice M., Winnipeg 1869
Houliston, Alexander, Three Rivers, Q.. 1865
Hunter, Herbert S., Montreal 1880
Hunter, Walter, Hamilton, O 1883
*Huntingt m, Russ Wood 1875
Hutchins, Horace A., East Farnham ... 1883
‡Hutchinson, Matthew, Montreal 1873
Ingalls, Allen G., Granby 1881
Jackson, Samuel W., Montreal 1881
Jenkins, George E 1874
Jodoin, Isaie 1858
Johnson, Edwin R., Stanstead, Q 1866
Joliffe, William J , Montreal 1882
Jolly, James G., Rockburn, Q 1885
Jones, Richard A. A., B.A., Montreal... 1864
Joseph, Joseph O., 33 St. Gabriel St., Montreal 186

Kavanagh, H. J., 117 St François Xavier St, Montreal 1878
Keller, Francis J., New York..... 1869
*Kelly, John 1826
Kemp, Edson, B.A., Montreal..... 1859
Kenny, Wm. R., Aylmer, Q 1865
Kirby, James, M.A., Montreal..... 1867
Kittson, Geo. R. W., 60 St. James St., Montreal 1867
Klock, Robert A., Montreal 1882
Knapp, Frederick A., 17 St. John St., Montreal 1877
Labadie, M. T., Adolphe, Montreal..... 1874
Labadie, V. A. Odilon, Montreal..... 1874
Lacoste, Arthur, Montreal..... 1869
Laflamme, R. G., Montreal..... 1856
Laflamme, Leopold, 42 St. James St., Montreal 1869
Lafleur, Eugène, B.A., Montreal..... 1880
*Lafrenaye, P. R 1856
Lamarche, Jos. L. R. dit Bricot, St. Vincent de Paul 1887
Lambe, William B., 63 St. Gabriel St., Montreal 1850
Lanctot, Husmer, 3 Place d'Armes Hill, Montreal 1878
Lanctot, Médéric, 69 Upper St. Urbain St., Montreal 1860
Lane, C., B.A., Montreal..... 1881
Laplante, Jean Bte., St. Stanislas..... 1880
Lareau, Edmond (ad eun), Montreal..... 1874
Larivière, Joseph 1874
Larose, Télesphore 1860
Lasalle, Lucien, 6 St. James St., Montreal 1877
Laviolette, Pierre B., 16 St. Vincent St., Montreal 1878
Laurier, Wilfrid, Arthabaskaville, Q 1864
*Lay, Warren Amos..... 1867
Lawlor, Richard S., Aylmer, Q..... 1865
Leach, David S., Montreal..... 1861
*Leach, Robert A., M.A..... 1860
Lebœuf, Louis C., 57 St. Gabriel St., Montreal 1873
Leblanc, Albert, 23 St. Denis St., Montreal 1879
Ledieu, Léon, 1 St. Pierre St., St. Henri, Montreal 1879
*Lefebvre, Toussaint Z., Montreal..... 1882
Lefebvre, Frederic, 6 St. James St., Montreal 1863
Lebourveau, Steadman A., Montreal 1876
Leet, Seth P., 163 St. James St., Montreal 1879
Leet, Lynn Tell, Montreal 1883
Lighthall, W. D., B.A., Montreal..... 1881
Lighthall, George R., Montreal..... 1882
Levy, J. C. E., 20 St. Louis St., Montreal 1878
Lonergan, James, 34 St. James St., Montreal 1873
Lonergan, Michael L. S., Montreal..... 1871
Loranger, Louis George..... 1863
Lyman, Albert, B.A., Montreal..... 1881
Lyman, Elisha Stiles 1865
Lyman, Frederick S., B.A., Montreal.... 1869
‡Lynch, Wm. W., Quebec 1868
Mackay, Frs. S., Papineauville, Q 1886
Mackenzie, Fred., Montreal 1861
Mackie, John F., Montreal, Q..... 1886
Macpherson, Kenneth R., B.A., Montreal 1884
Madore, Camille, Notre Dame de Grace.. 1880
‡Major, David, 61 St. Gabriel St., Montreal 1875
Major, Edw. Jas., 403 Guy St., Montreal. 1871
‡Marler, Wm. De M., B.A., Montreal... 1872
‡Martin, John E., Stafford, Q..... 1883
Martineau, Paul G., 84 Champlain St., Montreal 1879
Matheson, Roderick D, Charlottetown, P.E.I 1884
McConnell, Arthur, Hull, Q..... 1883
McCord, David Ross, M.A., 131 St. James St., Montreal..... 1867
McCorkill, John C. G. S., Montreal..... 1877
McCormick, Duncan L., Montreal 1871
McDonald, Frank H 1873
McDonald, John S..... 1876
McDougall, John M., Aylmer, Q..... 1877
McFee, Kutusoff N., B.A., Winnipeg.... 1880
*McGee, Thomas d'Arcy..... 1861
McGibbon, R. D., B.A., Montreal..... 1879
McGoun, Archibald, B.A., Montreal.... 1878
*McIntosh, John, B.A..... 1868
McKenzie, Peter S. G., Melbourne, Q... 1883
McKercher, John, Montreal..... 1880
McKinnon, Edmund..... 1878
McLaren, John Robert, M.A., 525 Sherbrooke St., Montreal..... 1859
McLaren, John J., Toronto..... 1868
*McLaurin, John Rice..... 1867
McLean, B. C., 19 St. Monique St., Montreal 1879
McLennan, William, Montreal..... 1880
McLennan, Francis, B.A., Montreal 1884
McLennan, Farquhar S., Montreal..... 1884
McMahon, Edward M., Montreal 1881
‡McMaster Donald, Montreal..... 1871
*McNaughton, Peter J 1879
Merry, John Westley, Sherbrooke, Q... 1870
Messier, Damase, 56 St. Gabriel St., Montreal 1875
Messier, Joseph S., St. John, Q 1868
Mignault, Pierre B., 36 St. Vincent St., Montreal 1878
Mitchell, Albert Ed., Sweetsburg, Q..... 1867
Molson, Alexander, 101 St. François Xavier St., Montreal..... 1851
Monk, A., Montreal 1886
*Monk, Ed., Cornwallis..... 1870
Monk, Frederick D., Montreal..... 1877
Morgan, Edward A. D., Montreal..... 1882
Morin, Pierre A., Montreal..... 1878
Morris, Alexander, M.A., Toronto, O..... 1850
Morris, John L., 40 St. John St., Montreal 1859
Morrison, Adelard, Napierville, Q..... 1879
‡Murchison, Roderick L., Dundee, Q.... 1887
*Murray, J. Ralph, B.A..... 1886
*Nagle, Sarsfield B..... 1862
‡Nicholls, Armine D., B.A., 48 Victoria St., Montreal..... 1879
Nichol, Thomas, M.D., LL.B., 140 Mansfield St., Montreal..... 1875
Nutting, Charles A., Waterloo, Q 1872
O'Halloran, George F., Cowansville, Q... 1885
Ouimet, Adolphe P., 332 Lagauchetiere St., Montreal..... 1861
‡Oughtred, Allan R., Sheridan, O..... 1881
Painchaud, Joseph, Montreal..... 1880
Palliser, Joseph, 17 St. John St., Montreal 1877
Panet, Edouard A..... 1874

Papineau, Joseph G., 32 St. James St., Montreal 1869
Pariseault, Charles Ambroise..... 1859
Pelletier, Louis C., 446 Mignonne St., Montreal..... 1877
Perras, F. X., 4 St. James St., Montreal. 1878
Perry, Joseph, New Orleans..... 1869
*Perkins, John A., M.A..... 1860
Perodeau Narcisse, 5 St. Therese St., Montreal..... 1876
Piche, Aristide 1868
Pillet, J. Henri, Court House, Montreal.. 1879
*Plimsoll, Reginald J., M.A..... 1861
Polette, Wm. A., Montreal..... 1881
Polette, L. T 1886
Poutre, Felix E Montreal 1875
Power, Alexander W. A., Ottawa..... 1868
Prefontaine, Raymond, Montreal 1873
Purcell, John D., 146 St. James St., Montreal..... 1877
Rainville, Henri Benj., 43 St. Gabriel St., Montreal..... 1873
*Ramsay, Robert A., M.A., Montreal.... 1866
Raynes, Charles, B.A., Montreal..... 1881
Reddy, John F., Montreal, Q..... 1888
Reddy, Wm B. S., Montreal..... 1880
*Redpath, Wm W., B.A..... 1881
Ricard, Damase F. J 1859
Rielle, Norman T., B.A., Montreal..... 1884
Richard, Emery Ed., Battleford, N.W.T. 1867
Richard, Edward E..... 1868
Ritchie, Wm. F., B.A., Montreal..... 1879
Rexford, Wm. Hawkins, San Francisco, Cal..... 1865
Robertson, David E., Lennoxville, Q.... 1883
Robidoux, J. Emery, Montreal..... 1866
Robillard, Emile 1874
Robillard, Ovide 1886
Rochon, Charles A., 212 Notre Dame St., Montreal..... 1861
*Rogers, John Henry, B.A., Montreal.... 1884
Rose, Wm., London, England..... 1866
Ross, Walter Lord, 11 Hospital St., Montreal 1879
Rutherford, Alex. C., Kemptville, O.... 1881
Rutherford, McC., Woodstock..... 1881
Sabourin, Ernest 1863
Santoire, Camille, Montreal..... 1863
Sarasin, Ferdinand Leon, 16 St. Vincent St., Montreal..... 1871
Scallon, Wm., Montreal..... 1876
Sexton, James Ponsonby, 59 St. François Xavier St., Montreal 1860
Sharp, W., Prescott..... 1880
Short, Robert, Richmond, Q..... 1867
Sjorstrom, Paul R. D., Sherbrooke, Q.... 1881
Smith, Arthur, B.A., Montreal..... 1885
Smith, Robert C., Montreal..... 1881
Shortiss, James, Three Rivers, Q..... 1881
Sicotte, V. B., Cadastre Office, Montreal. 1862
Snowdon, H. L., 67 St. Francois Xavier, Montreal..... 1856
Spong, John J. R., Montreal..... 1874
St. Jean, Edmund R., Montreal..... 1879
Stephens, Charles Henry, Montreal..... 1875
Stephens, George W., Montreal..... 1863
Stephens, Romeo H., 56 St. François Xavier St., Montreal 1850
Stephens, Charles O..... 1864
‡Struthers, Irving E., Phillipsburg, Q.... 1885
Tache, Pascal, Montreal 1876
Tait, Melbourne, Montreal 1862
Taschereau Arthur, Quebec..... 1864
Taylor, A. Dunbar, B.A, Montreal..... 1878
Taylor, Reid, Montreal 1869
Terrill, Joseph Lee, Stanstead, Q..... 1865
*Torrance, Fred. W, M.A., Montreal.... 1856
‡Trenholme, Norman W., M.A., Montreal 1865
Trenholme, Edward H., M.D., Montreal.. 1865
Trudel, Bouthillier J., 75 Dubord St., Montreal..... 1879
Tucker, Henry, Montreal, Q 1883
Vandal, Philippe, 58 St. Francois Xavier St., Montreal..... 1861
Vilbon, Charles A., 44 St. James St., Montreal..... 1863
Walker, Wm. S., 112 St. Francois Xavier St., Montreal 1874
*Walsh, Thomas Joseph..... 1860
Watts, Wm. J. B.A., Drummondville, Q 1869
Weir, Robert S., Montreal..... 1880
Weir, Wm. A, Montreal..... 1881
Weir, Frank, Montreal 1882
*Welsh, Alfred..... 1864
White, Wm. J., Montreal 1882
Wicksteed, Richard J., M.A., Ottawa.... 1868
Wight, James H 1868
Wood, Frank Ogilvie, Montreal..... 1870
Wotherspoon, Ivan T., (Laval) (ad eun), Montreal..... 1868
Wright, George C., Hull, O 1886
Wright, Wm. Mackay, B.A., Hull..... 1863
Wurtele, Charles J. C., Sorel, P.Q..... 1863
Wurtele, Jonathan S. C., Aylmer, Q..... 1870

*Deceased. ‡Elizabeth Torrance Medallists.

BACHELORS OF ARTS.

Allan, James G. (†F), Brooklyn, N.Y... 1873
Allan, John (N), Kinnear's Mills, Q.....1874
Allen, Frank A., Huntingdon, Q..... 1880
Allworth, John..... 1871
Amaron, Calvin E. (R2), Three Rivers, Q. 1877
Ami, Henry Mark, Geological Survey of Canada, Ottawa, O... 1882
Anderson, Jacob de Witt, (†C)..... 1866
Anderson, James A., Montreal. 1877
Archibald, John Sprott (†P), Montreal.. 1867
Atwater, Albert W., Montreal.. 1876
Aylen, Peter, B.C.L., Aylmer, O..... 1850
Bancroft, Rev. Charles, junior, Knowlton. 1866
Barlow, Alfred B. (N), Montreal..... 1883
Barnston, Alexander, (†) 1857
Barron, Thomas J., Lachute, Q 1882
Bayne, George D., Morrisburg, O 1880
Baynes, Donald, London, Eng..... 1864
Beckett, Wm. Henry 1866
Bell, John H., Kars, O..... 1886
Bennett, James, Montreal.... 1880
Bethune, Meredith Blenkarne (†N), Montreal..... 1866
Black, Chs., Granby, Q..... 1881

Black, James R..... 1874
Blackader, Alex. D. (N), Montreal..... 1870
Blackader, Edward H., Montreal..... 1884
Blair, Geo. A., Manotick, O 1886
Blakely, Malcolm D., Montreal..... 1878
Bland, Salem G. (Morrin), Montreal ... 1877
Bland, Charles E (†C), Montreal..... 1883
Bockus, Charles E..... 1652
*Bothwell, John A. (†N), Montreal..... 1864
Bourne, N. A. F , Thorne, Q..... 1887
Boyd, John (N2)..... 1861
Bracq, John C. (P2), Philadelphia, Pa... 1881
Braithwaite, E. E. (P), Unionville, O.... 1886
Brewster, Wm. (†C)..... 1865
Brooks, Charles H. (†N), Constantinople. 1868
Browne, Arthur Adderley (E), Montreal.. 1866
Brown, Thomas 1853
Brown, S. R., Huntington, Q..... 1887
Browne, A. J. (†) Morrin, Montreal, Q... 1883
Bryan, Andrew, Richmond, Q..... 1888
Bryson, Alfred P., Montreal, Q..... 1888
Budden, Hanbury A., Montreal..... 1885
Bull, Harcourt J. (†P), 16 Exchange Place, New York..... 1880
Bullock. Wm. E. (†P), Millbrook, O..... 1860
Calder, Geo. F., Lachute, Q..... 1885
Cameron, James, M.A. (†M), Millbrook, O. 1871
Cameron, John D., (†P), 138 St. James St., Montreal, Q 1883
Cameron, Donald, Tiverton, O..... 1885
Cameron, Kenneth (†N), Montreal..... 1884
Cameron, Wellington A. (P), Barrie, O 1887
Campbell, Henry (Morrin), Durham, Q . 1885
Carmichael, James, Markham, O..... 1867
Cassels, Hamilton (Morrin), Millichamp's Building, Adelaide St., Toronto..... 1873
Cassels, Robert (Morrin) (P), Ottawa.... 1866
Chalmers, Wm. W., Huntingdon, Q 1886
Chandler, George H. (†M), 32 Lorne av., Montreal..... 1875
Chipman, Clarence, Prescott, O..... 1866
Chubb, Sydney C. (N2), Brooklyn, N.Y.. 1877
Christie, John H., Lachute 1872
Christie, William, Lachute..... 1884
Clarke, Wallace (†E)..... 1869
Clay, Wm. L. (†), P.E.I..... 1887
Clements, Benjamin, Berthier en haut, Q.. 1886
Clerk, Ronzo H., Montreal, Q..... 1886
*Cline, John D. (†C)..... 1871
Clowe, John D..... 1863
Cockfield, Henry, Montreal..... 1882
Colby, Chas. W. (†E), Stanstead, Q..... 1887
Colquhoun, A.H. Urquhart(E), Toronto, O 1885
Cook, Archibald H. (Morrin), Quebec.... 1869
Cornish, Rev. Geo., B.A., London University (ad eun), Montreal..... 1856
Cox, Jacob W., Noel, Hants Co., N.S.... 1876
Craig, James A. (2), Fitzroy Harbor.... 1880
Craig, James, Renfrew, O..... 1874
Cross, Alexander S. (†), Montreal 1879
Cross, Eliza C., Lachine, Q 1888
Crothers, W. J. (P2), Phillipsburg, Q.... 1872
Crothers, Robert A. (†C), Bedford, Q.... 1876
Coussirat, Rev. Adrian D. (ad eun), Montreal..... 1871
Cunningham, Rev. Thos. E. (P2), Aylmer 1880
Currie, Alex., Widder, O..... 1885
Currie, Dougald (E), Crinan, O..... 1880
Currie, W. T., Toronto, O..... 1885
*Cushing, Lemuel (C) 1863
Dalpe, W. H., Roxton Pond, Q..... 1886
Darey, J. Herbert (†C), Montreal..... 1880
Dart, Wm. J., Laprairie..... 1868
Davidson, Charles Peers Montreal..... 1863
Davidson, Rev. James (ad eun), Montreal. 1863
Davidson, Leonidas Heber, Montreal..... 1863
Dawson, William B. (†N), Montreal..... 1874
Dawson, Rankine (2), Montreal..... 1878
Day, John L., (†C), Montreal, Q..... 1888
Dewey, Finlay McN. (P2), Richmond, Q 1874
Dey, William J. (†N), Montreal..... 1871
DeWitt. Caleb S., Lockport, Ill., U.S.... 1861
Dickson, James C., Montreal 1883
Dixon, Wellington (†E), Montreal..... 1883
Donald, James T. (†N), Montreal..... 1878
Dougall, Duncan, Windsor, O..... 1860
Dougall, John Redpath, Montreal..... 1860
Drummond, Chas. G. B. (N), Montreal.. 1862
Duclos, Charles A., (Morrin), Quebec ... 1881
Duff, Archibald (M), Airedale College, Yorkshire, Eng 1864
Duffett, Henry J., Megantic, Q..... 1883
Duffey, Henry T. (2), Bedford..... 1876
Duncan, Alex. E., Montreal..... 1867
Eadie, Robert (†), Oakland, O..... 1879
Elder, John (†P), Huntingdon, Q..... 1881
Ells, Robert (†N), Ottawa..... 1872
Empson, John, 71 University St., Montreal..... 1874
England, George P., Montreal, Q..... 1888
England, Luther M. (N), Knowlton, Q 1883
Evans, Cora Blanche B. (N), Montreal, Q 1888
Evans, W. Herbert, Montreal 1886
Ewing, Wm., Winnipeg, Manitoba..... 1878
Fairbairn, Thomas (P2)..... 1863
Falconer, Alex. (†E), Montreal 1881
Ferguson, James D., (Morrin), Quebec.... 1880
Ferguson, John D (Morrin) Quebec..... 1885
Ferguson, John S., Montreal..... 1861
Ferguson Wm. A. (†M), Richibucto, N.B.... 1881
*Ferrier, Robert W 1857
Fessenden, Elisha Jos , Chippewa, O.... 1863
Fleet, Charles J. (E), Montreal 1872
Forneret, Geo. E., Dunham Flats..... 1877
Fortin, Rev. Octave (ad eun) Winnipeg, Man 1867
Fowler, William (N) 1865
Fowler, Albert..... 1868
Fraser, John (Morrin)..... 1869
Fraser, William, Dundee, Q..... 1883
Fyles, Wm. A. (†C), South Quebec..... 1886
Gamble, Robert, Billing's Bridge, O.... 1881
Gerrie, Andrew W., Fergus, O..... 1887
Gerrie, John P., Fergus, O..... 1884
Gibb, Charles, Montreal..... 1865
Giles, William J. (N), Farmersville, O.. 1888
Gilman, Francis Edward, Montreal..... 1862
Gore, Frederick..... 1861
Gould, Charles H. (†C), Montreal 1877
Gould, Edwin, Montreal 1856
Graham, John (†E), Williamstown, O... 1876
Graham, John H., Ormstown, Q..... 1878
Grandy, John, Millbrook, O..... 1866
Grant, Andrew S., La Guerre, Q..... 1885
Gray, Wm., Union Theological Sem., N. York 1876
Green, Joseph (†C), 600 West 5th St., Cincinnati. Ohio, U.S..... 1861
Green, Lonsdale, 118 Leadenhall Street, London. E.C., Eng..... 1864
Greenshields, Rbt. A. (†), Danville, Q... 1883

Greenshields, Edward B. (†P), 305 Peel St., Montreal 1869
Greenshields, Samuel, Montreal 1874
Gregor, Leigh R. (P2), Montreal 1882
Guerin, Edmund W. P. (†E), 102 St. Francois Xavier St., Montreal 1878
Guignard, J. A., B.A., (Un. Fr.) ad eun, Ottawa 1883
Hague, Henry J. (†C), Montreal 1882
Hall, John S., Montreal 1874
Hall, Rev. Wm., 30 Fort St., Montreal.. 1861
Hargrave, Isaac L., High Bluff, Man... 1886
Hart, Lewis A., Montreal 1866
Harrington, Bernard J. (†N), Montreal.. 1869
Harvey, Alfred, St. John's, Newfoundl'd 1874
Harvey, Charles J., St. John's, Nfld.... 1874
Haythorne, Thos., Charlottetown, P.E.I. 1884
Hemming, Henry (Morrin), Quebec.... 1880
Henderson, Robert B. (P2), Montreal... 1887
Hibbard, Fred. W., Freligsburg, Q..... 1886
*Hicks, Frank W. 1864
Higgins, Joseph H., Brucefield, O..... 1885
Hindley, John, Montreal 1868
Hodge, D. W. R. (†E), Sherbrooke, Q. 1872
Holden, Edgar De F., St. Armand Centre, Q..... 1886
Holiday, Caleb S., Huntingdon, Q..... 1870
Home, W. A. (Morrin), Quebec 1885
Howard, Robt. J. B. (†N), Montreal.... 1870
Howitt, William, Guelph 1888
Hunter, Georgina (†E), Montreal..... 1888
Hunter, Walter, B.C.L., Hamilton, O... 1883
Jones, Montgomery, Hatley, Q..... 1869
Johnson, Alex. R. (†M), Montreal..... 1887
Johnston, Rev. Jas. A. (†P), Rutland, Vt. 1870
Johnston, Robt. (†), Kincardine, Q..... 1887
Joseph, Montefiore (N), Quebec..... 1870
Kahler, Frederick A. (†C), Germantown, Phil, U.S..... 1869
Keays, Chas. H., Hamilton, O..... 1880
Kelly, Frederick W. (†E), Montreal.... 1871
Kemp, Edson, Montreal..... 1859
Kennedy, Geo. T. (N), King's College, Windsor, N.S 1868
Kennedy, Robert Alex., Ottawa, O..... 1884
*Kershaw, Phillip G 1867
Kingston, Chas. B., Montreal..... 1887
Kinnear, George, Megantic, Q..... 1883
Kirkpatrick, Robert C., Montreal..... 1884
Kirby, James (†), Montreal..... 1859
Klock, Robert A., Aylmer, Q..... 1880
Krans, Edward H. (†E), New York..... 1865
Lafleur, Eugene (†P), Montreal..... 1877
Lafleur, Paul T. (†E), Ottawa..... 1880
Lafleur, Henri A. (†N), Montreal..... 1882
Laing, Robert (†P), Halifax, N.S..... 1868
Lane, Campbell, 293 Peel St., Montreal. 1879
Langton, J. F., Montreal..... 1887
Lariviere, Vitalien, Roxton Falls, Q.... 1880
Lariviere, Dolard, Roxton Falls, Q..... 1884
Larkin, F. W., Halifax, N.S 1888
Laurie, Arch. (Morrin)..... 1887
*Leach, Robert A..... 1857
Lee, Arch. (C), Sherbrooke, Q 1883
LeRossignol, James E. (†N), Montreal.. 1888
*Lewis, Albert R. (†E)..... 1869
Lighthall, Wm. D. (†E), Montreal..... 1879
Lindsay, Norman (P2), New Richmond, Q 1888
Livingstone, Colin H. (†), Stuyvesant Park, New York..... 1886
Lochhead, Wm. (N), Listowell, O. 1885
Lyman, A. Clarence, Montreal..... 1878
Lyman, Henry H (†N)..... 1876
Lyman, Frederick Stiles, Montreal..... 1863
Lyman, Walter E. (M L2), Montreal.... 1881
Mabon, James (†P), Inverness, Q..... 1884
Macallum, Fred. K. W., St. Elmo, Q 1888
Mackay, Adam A. (†M), Halifax, N.S.. 1884
Mackie, John F. (†), Morrin, Point Levi, Q..... 1883
Major, George W., Montreal..... 1870
Marceau, James 1884
Marler, Wm. de M. (†M), Montreal. ... 1868
Martin, Alfred W., Montreal..... 1882
Martin, Charles F. (E), Montreal. 1888
Martin, J. C. (E), Brown's Creek, P.E.I 1835
Mason, Horace E. C., Montreal 1888
Mason, James L 1859
Massé, Arthur, Grande Ligne, Q. 1888
Massé, Godefroi (†), Grande Ligne, Q.. 1884
Matheson, John, Presbyterian College, Montreal 1876
Mattice, Corydon J., Cornwall, O..... 1859
Maxwell, John (N), L'Orignal, O..... 1879
McArthur, Arch., Dalesville, Q..... 1887
McClure, Wm. (†M), Montreal..... 1879
McConnell, Richard G. (N), Montreal... 1879
McCord, David Ross, Montreal..... 1863
McDonald, Hector C., Charlottetown, P.E.I 1881
McDonnell, Richard L. (†C), Montreal 1873
MacDougall, John (†), Ormstown, Q. 1886
MacDuff, Alexander Ramsay..... 1866
McFarlane, James A. (†P), Pontiac, Q.. 1885
MacKay, Daniel, Pictou, N.S 1882
McFadyen, Allan L., Montreal..... 1878
McFee, Janet D. (P), Montreal 1888
McFee, Kutusuff N., (†P), Winnipeg, Man 1874
McGibbon, Robert D., Montreal..... 1877
McGoun, Archibald (†P), Montreal..... 1876
McGregor, Archibald F., Listowell, O. 1877
McGregor, James (C), Montreal 1864
McGregor, Duncan, Guelph, O..... 1871
*McIntosh, John (†M)..... 1870
McIntyre, Hector A., Manilla, O..... 1881
McKenzie, John (Morrin) 1867
*McKenzie, Robert (P)..... 1869
McKenzie, Wm. A. (C) Lanark, O..... 1881
McKibbin, Wm. M., Edwardsburg, O... 1875
McKibbin, Robert, Edwardsburg, O.... 1879
McKillop, Roland, Inverness, Q..... 1878
McKillop, Peter C., Inverness, Q..... 1882
McLaren, David C., Montreal 1878
McLaren, John R., 525 Sherbrooke St., Montreal..... 1856
McLaren, Harry (†), 67 Mansfield St., Montreal..... 1858
McLean, Neil W. (Morrin), (P2) 1809
McLean, Bredalbane S., Montreal..... 1869
McLennan, Duncan H., Alexandria, O.. 1871
McLennan, John S. (P), Montreal..... 1874
McLennan, H. S. (†M L), Montreal..... 1885
McLennan, George A., Underwood, O.... 1885
MacLennan, Malcolm, Gould, Q..... 1887
McLeod, Arch., Orwell, P.E.I..... 1881
McLeod, Duncan C. (†M), Charlottetown, P.E.I..... 1873
*McLeod, Hugh..... 1866
McLeod, Findlay J., Winnipeg, Man . 1872
McLeod, Murdoch J., Valleyfield, P.E.I. 1887

McLeod, Norman (Morrin), Brompton Gore, Q. 1883
McNabb, Robt., Woodville, O 1881
*McOuat, Walter (N) 1865
McOuat, John W., Inkerman, O 1886
McPhail, J. A., Orwell, P.E.I. 1888
McRae, Duncan A., Apple Hill, O. 1886
McWilliams, Andrew, Ulster, O. 1884
MacPherson, Kenneth R. († N), Montreal 1881
MacVicar, J. Harvey, Montreal 1885
Mercer, Walter D., Montreal 1880
Merritt, David, Prescott 1863
Molson, Chas. A. (†N), Montreal 1880
Moore, Francis X 1868
Morin, Joseph L. (†ML), Three Rivers, Mass., U.S. 1882
Morison, John A., Ormstown, Q. 1888
Morris, William, Montreal 1859
Morris, Alexander, Toronto, O. 1849
Morrison, John 1866
Morrison, Jas. D. (†N), Ogdensburg, N.Y 1865
Morrison David W. (†), Ormstown, Q.. 1870
Muir, Andrew C., Georgetown, Q. 1880
Muir, John F. 1864
*Muir, Rev. E. P. (ad eun) 1865
Munro, Gustavus, Embro, O. 1871
Munro, Murdoch, Williamstown, L'Orignal 1872
Murphy, Martha C., Montreal, Q. 1888
Murray, Alice J., Montreal, Q. 1888
*Murray, Charles H. (†N) 1873
*Murray, J. Ralph († M) 1883
Murray, Alfred P., Montreal 1887
Naismith, James (P2), Almonte, O. 1887
Naismith, Peter L., Pembroke, O. 1888
Naylor, W. H. (P), Clarendon, Q. 1872
Newnham, Rev. Jarvois A., Montreal 1878
Nichols, Wm. A., Montreal 1887
Nicholson, John A., Eldon, P.E.I. 1887
O'Halloran, G. F., Cowansville, Q. 1883
O'Sullivan, R. Benj. Jamaica, W.I. 1886
Ogilvie, Archibald N., Georgetown, Q. ... 1880
Oliver, Theophilus H. (Morrin) (P2) 1866
Palmer, Jane V., Ottawa, O 1888
Parent, Manasseh B. (†), St. Pie, Q 1884
Parsons, Simeon H., B.B. Univ. New Brunswick) (ad eun), Montreal 1881
Patterson, Wm. (C), Ormstown, Q. 1886
Patton, Hugh M. (ML2), Montreal 1887
Pease, Geo. H. († C), 120 Broadway, New York 1664
Pedley, Hilton (†N), Cobourg, O. 1838
Pedley, Hugh, Cobourg, O. 1875
Pedley, Charles S. (P), Port Perry, O. ... 1878
Pedley, James W., Cobourg, O. 1884
Pedley, Francis (P), Cobourg, O. 1886
Perrigo, James (N), Montreal 1866
*Perkins, John A 1858
Petit, Rev. Charles P. 1850
Phillips, Charles W 1852
Pillsbury, Carroll E., Augusta, Me., U.S. 1880
*Plimsoll, Reginald J. 1858
Porter, Jas. A. (†N), Powassan Station, O 1883
Pritchard, John C. (Morrin), Quebec ... 1881
*Ramsay, R., Anstruther, B.C.L., (†N), Montreal 1862
Raynes, Charles, Montreal 1880
*Redpath, George D., Montreal 1857
*Redpath, William W. 1879
Reddy, Herbert L. (†) 1873
Reid, James (P2), North Mountain, O .. 1881
Rexford, Elson I. (P), Quebec 1876
Rielle, Norman T. († C), Montreal 1882
Richardson, A. W., Montreal 1883
Ritchie, Arthur F. (†), St. Paul, Minn . 1873
Ritchie, Octavia G. (N), Montreal, Q... 1888
Ritchie, Wm. F. (†), 660 Sherbrooke St., Montreal 1875
Ritchie, Philip E. († ML), Montreal.... 1886
Rivard Ed. S. (Morrin) 1887
*Roberts, George F. (P2) 1880
Roberts, W. D., S. Paul, Minn 1886
Robertson, Alex. († N), 1100 Dorchester St., Montreal 1870
Robertson, Geo., Garafraxa, O. 1881
*Robertson, Robert (P) 1877
Robertson, Philip M., Montreal. 1885
Robins, Sampson Paul († M), Montreal.. 1863
Rochester, Wm. M. (†C), Montreal. 1887
Rogers, George (N2), Montreal. 1884
Rogers, J. H. (†P), Huntingdon, Q. 1882
Rolph, Nathaniel (Morrin), Quebec. 1885
Rondeau, Sam. (M 2), St. Elizabeth, Q 1884
Ross, George (†C), Montreal 1862
Ross, James, († P), Huntingdon, Q. 1878
Ross, L. F., Montreal 1883
Ross, J. T., (†) (Morrin), Quebec. 1883
Russell, Henry, (Morrin) 1869
Russell, Walter, Bristol, Q. 1887
Rutherford, Alex., B.C.L., Kemptville, O 1881
Sanders, Wm., Montreal 1887
Scott, Henry C. (Morrin) (P), Montreal.. 1866
Scott, Matthew H. († N), Bristol, Q. 1877
Scrimger, Alex. (†), Galt, O. 1883
Scriver, Charles W., Hemmingford, Q... 1880
Shearer, W. K., Athelstan, O. 1883
Sherrill, Alvan F. († N), Omaha, Nebraska, U.S. 1864
Silver, Herbert J. (Morrin), Danville, Q. 1885
Slack, George, Montreal 1868
Smith, Arthur W. (N), Montreal. 1882
Smyth, Rev. Wm. J., (ad eun) 1887
Solandt, A. P., Inverness, Q 1887
Sparling, Wm., Stafford, O 1886
Stethem, George T. 1859
Stevens, Wm. H., St. Johns, Q. 1879
Stevenson, Samuel C., Montreal. 1874
Stevenson, Rev. J. F., B.A., London Univ. (ad eun), England. 1876
Stewart, Robert, Lachute, Q. 1882
*Stewart, Colin Campbell (†N) 1867
Stewart, Wm. S. (†C), Charlottetown, P.E.I. 1878
Stewart, Wm. G. (†N), Arundel, Q. 1885
Stirling, Robert, Montreal 1882
Stuart, Gustavus G (†P), Quebec 1875
Swabey, Chas. (†N), Charlottetown, P.E.I 1886
Sweeny, George R., Montreal, Q. 1888
Sweeney, James F., Franklin, Q 1878
Tabb, Silas Everett (P), Sherbrooke, Q.. 1869
Taylor, Archibald D. (C), Montreal 1874
Taylor, Edw. T., Peshawa, Bengal, India 1878
Taylor, Ernest M., Chambly, Q. 1875
Thomas, Henry W. († E), Montreal.... 1874
Thomas, F. Wolferstan G., Montreal.... 1882
Thompson, G. J. A., Harbor Grace, Nfld 1885
Thornton, Rev. R. McA., Toronto (ad eun), London, Eng. 1872
Thornton, Hastwell W. (N), New Richmond, Q. 1878
Thurlow, H. M., Ormstown, Q. 1888
Topp, Francis († M), Granby, Q. 1886

Torrance, Edward F. (P2), Peterboro, O. 1871
Torrance, Frederick W., Brandon, Man.. 1878
Torrance, John Fraser, Montreal..... 1872
Trenholme, Norman Wm. (†P), Montreal 1868
Trenholme, Chas. W. (N), Montreal..... 1882
Tucker, Jno. W. † C), Montreal..... 1881
Tunstall, Simon J. (*), Montreal..... 1873
Tupper, James S. (C), Winnipeg, Man.. 1871
Turner, Walter H. († E), Montreal..... 1884
Unsworth, Jos. K. († [illegible]), Paris, O 1884
Walker, George F., Waddington, N.Y., U.S 1882
Wallace, Robt. W. (P), London, O 1872
Wallace, Wm E., Montreal..... 1886
Walsh, J. B. (†N), Ormstown, Q..... 1887
Walters, Albert H. (Morrin), Quebec.... 1885
Ward, George B. (†C)..... 1874
Warriner, Rev. Wm. H. (†E), Yorkville, O..... 1877
Watson, Murray, Montreal..... 1885
*Watson, Alindus J..... 1876
Watts, Wm. John (C),Drummondville,Q. 1866
Weeks, Wm. A., Charlottetown, P.E.I... 1881
Wellwood, James, Minnedosa, Man..... 1878
Whillans, George (P2), Ottawa..... 1872
Whillans, Robert, Ottawa 1872
White, Wm., Montreal..... 1881
White, Walker W., B.A., Univ. New Brunswick (ad eun)..... 1885
Whyte, C. W., Montreal 1887
Wicksteed, Richard J. (C), Ottawa..... 1863
Wilson, John (P)..... 1866
Wood, Frank O., Montreal..... 1869
Wood, Holton H., 764 Sherbrooke St., Montreal..... 1879
Wood, Thomas F., Montreal..... 1869
Wotherspoon, Ivan T. (Morrin) (P), Montreal..... 1866
Wright, George C., Hull, Q..... 1884
Wright, Wm. McKay, Ottawa 1861
Walker, John (Morrin), Quebec..... 1880
Walker, Thomas..... 1860
Yales, Nelson P. (P), Frelighsburgh, Q.. 1886

[C] First Rank Honours in Classics. [C2] Second Rank do.
[E] do do do in English Literature, etc. [E2] do do
[M] do do do in Mathematics and Physics. [M2] do do
[N] do do do in Natural Science. [N2] do do
[P] do do do in Mental and Moral Philosophy. [N2] do do
[ML] do do do in Modern Languages. [ML2] do do

†Indicates the Gold Medallist for the subject denoted by the letter to which it is prefixed; or, if standing alone, for best general standing. For the titles of the Gold Medals, assigned to the several subjects since 1884, see § VI. of Faculty of Arts.

In 1857, 1858, 1859, the Chapman Medal was awarded for the best general standing; 1860, 1861, 1862, for Classics; 1863 for Mental and Moral Philosophy; 1864 for Natural Science.

In 1862, the Prince of Wales Medal was awarded for Natural Science; 1863 for Mathematics and Physics; 1864 for Classics.

BACHELORS OF APPLIED SCIENCE.

In Civil and Mechanical Engineering.

Archibald, Hy. A., C.P.R., Montreal... 1881
Ball, John P., Charlottetown, P.E.I..... 1887
Batcheller, Alvan A., Bedford, Q 1875
Bell, Robt. (N), M.D., Geological Survey, Ottawa 1861
Boswell, St. George J., Assistant Engineer Harbor Improvements, Quebec..... 1874
Boulden, Chas. M., Millersburg,Ky.,U.S. 1878
Brodie, Robert J., Smith's Falls, O..... 1873
Child, Arthur E., Montreal 1888
Chipman, Willis (N), Brockville, O..... 1876
Collins, John J., Ottawa 1882
Cowie, Fred. W., Montreal 1886
Davis, Allan R., Adolphustown, O 1884
Dawson, Geo. H., Montreal..... 1886
Dawson, W.Bell, M.A., C.P.R.,Montreal 1875
Dowling, Donaldson Bogart (‡), Ottawa. 1883
Drummond, Arthur L. (‡), Montreal..... 1888
Drummond, Thos., Montreal..... 1882
*Dudderidge, James, Lachute, Q..... 1880
Eneas, Aubrey G., Montreal..... 1888
Forneret, V. F. W., Berthier en haut, Q.. 1887
Forlong, Gordon, Montreal 1884
Fortier, Sam.,Denver, Col..... 1885
Foster, Philip L., Longueuil, Q 1882
*Frothingham, John J..... 1875
Graham, Wm., St. Paul..... 1884
Green, Thos. D., Dominion Lands Office, Ottawa 1882
Harvey, Chas.J., B.A., St. John's, Nfld. 1874
Hawley, David F., Nutts Corners, Q.... 1876
Hetherington, Frederick, Quebec..... 1876
Hall, Richard, Rat Portage, O..... 1878
Hill, Arthur E., New Westminster, B.C. 1875
Hislop, John L., C.P. Ry..... 1884
Hopkins, Marshall W., Stoney Creek, O. 1888
Jones, Thomas H., Brantford, O..... 1877
Kennedy, George T., M.A., Windsor,N.S 1873
Kerry, John G. G. (‡B), Algoma Branch C.P.R..... 1886
Lesage, T. W., Montreal..... 1885
Lovelace, Edgar S. M. (‡B), Longueuil,Q 1888
McCarthy, Jas. M.,Fort Covington,N.Y. 1887
McDonald, John, Omaha, Neb..... 1884
McEvoy, James, Ottawa, O..... 1883
McKenzie, John M., Stellarton, Pictou, N.S..... 1884
McLeod, Clement H., Montreal..... 1873
McLean, Alex. J., B. W. & Slt. St. Marie Ry., Brockville, O 1874
McMillan, David E., G.T.R., Chicago.. 1884
Miller, Frederick F. (†), Napanee, O.... 1882
Moffatt, James W., West Winchester, O. 1884
O'Dwyer, John S. (‡),C.P.R. Algoma Br. 1880

Ogilvy, David, Omaha, Neb..... 1884
Ogilvy, Robert F., Montreal..... 1888
*Page, John..... 1875
Palmer, R. E., Baie des Chaleurs Ry.. 1887
Richard, Louis Napoléon, Ottawa..... 1881
Rinfret, Raoul, St. Stanislas de Batiscan, Q..... 1887
Robertson, Geo. E., Dickinson's Landing, O..... 1874
Rogers, Richard B., Front Canal Works, Peterboro, O..... 1877
Ross, George, Welland, O..... 1875
Ross, Phillip D., Ottawa..... 1878
Routhier, Jude J. T., Vankleek Hill, O.. 1875
Saunders, Bryce J., Farmersville, O..... 1886
Skaife, Wilfred T., Montreal..... 1880
Smith, Richard F., Monrreal..... 1883
Smith, Cecil Brunswick (‡), Winona, O.. 1884
Sproule, Wm. J., Harbor Wks., Montreal 1877
Stewart, D. H., C.P.R., Montreal..... 1873
Swan, John, Windsor St., Montreal..... 1878
Taylor, Daniel, Duluth, O..... 1887
Thompson, Wm. T. (**N**), Qu'Appelle, N.W.T..... 1887
Thompson, Hedley Vicars (‡), C.B. & Q. Ry., Chicago..... 1885
Tremblay, Alfred J., St. Roch des Aulnets, Q..... 1888
Trueman, Herman, Truemanville, N.S... 1886
Waddell, Robert Wm., Denver, Col..... 1881
Waddell, J. A. L., C.E., Kansas City.... 1882
Walbank, Wm. McL., University St., Montreal..... 1877
Wardrop, Norval, Detroit, Mich..... 1877
Wicksteed, Henry K., Port Arthur, Ont 1873
Wilson, Robert A., Winnipeg, Man 1875

In Mining and Assaying.

Brown, Chas. P. (**N**2), Duluth & Michigan Railway..... 1886
Carlyle, W. A. (‡**B**), (**N**), C. P. Ry., Lindsay, O..... 1887
Ferrier, Walter F. (‡**N**), Montreal..... 1887
Howard, Wm. H. (**N**), Montreal, Q..... 1883
Low, Albert P., (**N**), Ottawa, O..... 1882
Macnutt, Charles H. (**N**2), Ottawa, O ... 1888
Macy, Ernest McC. (**N**), Melbourne, Q.. 1885
Mathewson, Ed. P. (**N**), Pueblo, Col 1885
Reid, Wm. M., Montreal, Q..... 1886
Robert, Joseph A., Ottawa..... 1884
Robertson, William F. (**N**2), Montreal.... 1880
Rogers, Richard B., Peterborough O..... 1878
Roy, François Xavier A. (S. B., Laval).. 1888
Spencer, Joseph Wm. (**N**), Washington, D.C..... 1874
Torrance, John Fraser, B.A. (**N**), Montreal..... 1873
Trenholme, Chas. Wm. (‡**B**), Montreal.... 1885
Wicksteed, Henry K..... 1874
Wilkins, Dan. F. H. (B.A., Tor.), (**N**), Mount Forrest, O..... 1875

In Practical Chemistry.

Adams, Frank (**N**), Geological Survey, Ottawa..... 1878
Burland, Jeffrey H. (**N**2), Montreal..... 1882
Evans, Nevil N., Montreal, Q..... 1886
Hamilton, Edward H. (**N**2), Montreal..... 1884
Hamilton, William J., Montreal, Q..... 1888
Waters, Charles L. Montreal, Q..... 1888
Weir, Arthur (‡), Montreal..... 1886

GRADUATES IN CIVIL ENGINEERING.

Barnston, Alexander, B.A..... 1859
Crawford, Robert..... 1859
Doupe, Joseph, Winnipeg, Man..... 1861
Edwards, George..... 1863
Frost, Geo. H., Tribune Building, N.Y.. 1860
Gaviller, Maurice..... 1863
*Gooding, Oliver..... 1858
Gould, James H..... 1862
Kirby, Charles H., 58 Crescent St., Montreal..... 1860
McLennan, Christopher..... 1859
Reid, John Lestock, Prince Albert, Man 1863
Rixford, Gulian Pickering..... 1864
Ross, Arthur, Montreal, Q..... 1860
*Savage, Joseph..... 1860
Walker, Thomas, B.A..... 1860

‡ Gov.-General's Medal for highest general standing in Examinations for Bachelor of Applied Science; (‡**B**) British Association Gold Medal.

* Deceased.

NOTE.—The Registrar of the University will be grateful for any corrections or additions to the addresses given in the above lists, and also for communication of titles which graduates may have acquired since their graduation.

Students of the University.

SESSION 1887-8.

McGILL COLLEGE.

FACULTY OF LAW.

FIRST YEAR.

Doherty, Marcus E.,	Montreal, Q	Henderson, Robt Ben.,	Montreal, Q
Dunlop, John Hamilton,	Montreal, Q	Kneeland, Warren Ander.,	Montreal, Q
Girouard, Désiré Howard,	Montreal, Q	Lemieux, Rodolphe,	Montreal, Q
Harvey, Alfred Eugène,	Stanstead, Q	Vipond, Thomas John,	Montreal, Q

SECOND YEAR.

Barnard, Chas. Austin,	Montreal, Q	Topp, Francis,	Montreal, Q
Clerk, Ronzo Heathcote,	Montreal, Q		

THIRD YEAR.

Budden, Hanbury Arthur,	Montreal, Q	Fry, Henry, jr.,	Montreal, Q
Dunton, Robert Andrew,	Montreal, Q	Reddy, John Fleming,	Montreal, Q
Ferguson, John,	St. Anicet, Q		

PARTIAL.

McTavish, George Taché, Montreal, Q

FACULTY OF MEDICINE.

Addy, G. A. B., St. John, N.B.
Alexander, W. W., Stanhope, P.E.I.
Anderson, A , Montreal, Q.
*Ault, C. A., Oshkosh, Wis.
Aylen, W. W., Aylmer, Q.

Baer, D. C., Summerfield, Ill.
Bayne, C. W., Merivale, O.
Beaman. W. H., Montreal, Q.
Bell, J. H., Kars, O.
Bennie, R., Riverfield, Q.
Berry, R. P., Lindsay, O.
Beers, A. H., Montreal, Q.
Berwick, R H., Farnham, Q.
Bissett, C. P., River Bourgeois, N.S.
Blanchard, S., St. Ann's, Q.
Booth, J. S., Montreal, Q.
*Bowes, E. J., Ottawa, O.
Bowie, R. A , Brockville, O.
*Bradley, W. I., Ottawa, O.
Broderick, E. J., Fredericton, N.B.
Brouse, J. E., Brockville, O.
Brown, W. A., Chesterville, O.
Brown, G. A., Charlottetown, P.E.I.
Burnette, J. T., Cornwall.
Burritt, C. H., Mitchell. O.
Busby, J., Pontviews, O.

Calkin,
Calkin, C. B., Kentville, N.S.
Cameron, J. J., Lancaster, O.
Campbell, G. G., Truro, N.S.
Carbin, F. G., Bedford, N.S.
Carlaw, C. M., Warkworth, O.
Carter, L. H., Belleville. O.
Castleman, A. L., East Williamsburg, O.
Chalmers, W. W., Huntingdon, Q.
Clark, J., Troy, O.
Clarke, J. W., Tatamagouche, N.S.
Clemesha, J. C., Port Hope, O.
Clouston, J. R., Maple Hill, Q.
Clune, P. J., Warkworth, O.

Coleman, A. H., Belleville, O.
Connolly, A J. Lennoxville, Q.
Conroy, C. P., Marlintown, O.
Creasor. J. A., Owen Sound, O.
Curtis, I. B., Hartland, N B.

Davis, A. H., Glen Buel, O.
Delaney, W. J , Peterboro', O.
Desmond, F. J., Newcastle, N.B.
Dewar, A., Ormond, O.
Dewar, C. P., Ottawa, O.
Douglas, A. E., Hillsboro', P.E.I.

Ellard, J., New Westminster, B.C.
Ellis, T. H., Pembroke, O.
England, W. S., Dunham, Q.
Esson, A. C., Halifax, N.S.
Esson, F. G., Halifax, N S.
*Evans, D. J., Montreal, Q.

Farwell, W. A., Lennoxville, Q.
Ferguson, W. D., Cumberland, O.
Fletcher, R. W., Londonderry, N.S.
Fritz, H. D , St John. N.B.
Fulton, J. A., Franklin Centre, O.
Fulton, C., Avonmore, O.

*Garrow, A. E., Ottawa, O.
Gemmill, E. W., Almonte, Q.
Grafton, E. A., Montreal, Q.
Green, T. J., Appleton, O.
Goodwin, W. W., Baie Verte, N.B.
Gorrell, A. G., Brockville, O.
Guerin, J. M , Montreal, Q.
Gunne, N. D., Seaforth, O.

Haentschel, C. W., Pembroke, Q.
Hall, M. K., Franklin Centre, Q.
Haldimand, A. W , Montreal, Q.
Hamilton, H. D., Montreal, Q.
Hamilton, W. F., Sackville, N.B.
Harris, N. M , Ormstown, Q.
Harrison, J. D., Fredericton, N B.
Hartin, G. Twin Elm, O.
*Hattie, W H., New Glasgow, N.S.
Hayes, J., Nelson, N.B.
Henwood, J. M., Hamilton, O.
Hewetson, J., Riverside, Cal.
Hewitt, J., Quebec, Q.
Hickey, W. H., Morrisburg, O.
*Hilton, W. L., Montreal, Q.
Hoare, C. W., Strathroy, O.
*Holden, D. B., Montreal, Q.
Holmes, A. D., Chatham, O.
Hopkins, F. A., Cookshire, Q.
Hopkins, H. J., Cookshire, Q.
Hubbard, O. H., Gilsam, N.H.
Hubert, P. T., Harbor Breton, Nfld.
Hughes, J. M., Chesterville, O.

Ibbotson, F A., Montreal, Q.
Inksetter, W. E., Copetown, O.
Internoscia, A., Montreal, Q.
Irwin, H., Pembroke, O.
Irwin, W. T., Pembroke, O.

Jayet, A. A., Montreal, Q.
Jenkins. H. E., Conquerell, N.S.
Jento, C. P , Belleville, O.

Kee, D. N., Fordyce, O.
Keir, E. J., Princeton, P.E.I.
Kelley, C. J., West Flamborough, O.
Kemp, H. D., Montreal, Q.
Kent, H. V., Truro, N.S.
Kenney, F. L., St. John, N.B.
*Kennedy, J. H., Lindsay, O.
Kerr, N , Holyrood, O.
Kincaid, R. M., Clarenceville, Q.
Kincaid, R. J., Fredericton, N.B.
Kirkpatrick, E. A., Kentville, N S.
Kyle, J. N., North Winchester, O.

Lambert, E. M., Ottawa, O.
Lang, M. F., St. Marys, O.
Lewin, A. A., St. John, N.B.
Liddell, G. L., Cornwall, O.
Long, C. H., Keswick Ridge, N.B
Lovering, W. T., Northfield, Minn.
Low, D., Palmerston, O.
Lucas, M., Montreal, Q.

Mader, A. J., New Canada, N.S.
Main, C. G., Canterbury, N.B.
Martin, M. McL., Brown's Creek, P.E.I.
Martin, J. M., Brown's Creek, P E I.
Mathieson, C. S., Harrington, P.E.I.
Metcalfe, F. T., Buffalo, N.Y.
Mill, J., Aylmer, Q.
Moffat, R. D., Walkerton, O.
Morehouse, O. E., Gibson, N.B.
Moore, J. M., Belleville, O.
Morphy, A. G , London, O.
Morris, O., Pembroke, O.
Morrow, W. S., Halifax, N.S.
Morrow, C., Russell, O.
Moss, J. N., Carleton, O.
Mowat, M. M., Williamstown, O.
Muirhead, D. A., Carleton, O.
Mulligan, E A., Aylmer, Q.
Murray, D. A , Back Meadows, N.S.
*Murray, M. W., Beachwood, O.
*Mutch, P. R., St. John, N.B.
McAdam, D., N.S. E. Bay, N.S.
McCarthy, J. G., Sorel, Q.
McCann, E., Smith's Falls, O.
McCrimmon, A. A., St. Thomas, O.
McCurdy, T., Ormstown, Q.
McDonnell, Æ. J., Morrisburg, O.

McDonald, J., Kincardine, O.
McDonald, M. S., Scotchtown, O.
McDonald, H. N., Loggan, O.
McDonald, G., Renfrew, O.
McDonald, A., Iroquois, O.
McDonald, P. A., Alexandria, O.
McDougall, D. S., Russell, O.
McEown, F., Winnipeg, Man.
McEwen, H., Carleton, O.
McFarlane, M.A., Arnprior, O.
McGaman, G. F., Richmond, Q.
McGregor, J. G., Martintown, O.
McGuire, J. C., Trenton, O.
McIntosh, D. H., Carleton, O.
McKee, G. L., Coaticook, Q.
McKechnie, R. E., Winnipeg, Man.
*McKercher, H., Stittsville, O.
McKenzie, A., Smith's Falls, O.
McKinnon, G. W., Sunnyside, P.E.I.
McKinnon, T. H., Lockport, N.S.
McLean, D. W., Ottawa, O.
McLennan, D., Dunvegan, O.
McLellan, A., Indian River, P.E.I.
McLellan, A. A., Summerside, P.E.I.
McManus, H. D., Fredericton, N.B.
McMartin, D. R., Martintown, O.
McMillan, J. H., Pictou, N.S.
McNeece, J., Brampton, O.
McPhail, J. A., Orwell, P.E.I.

*Noble, C. T., Sutton, O.

*O'Connor, C., Worcester, Mass.
Oliver, A. J., Cowansville, Q.
Orr, J. E., Mount Elgin, O.
Orr, A. E., Cookshire, Q.

Palmer, P. E., Riverside, N.B.
Park, G. H., Quebec, Q.
Park, P. C., Durham, Q.
Patton, H. M., Winnipeg, Man.
Pearman, H. V., Halifax, N.S.
Philp, W. S., Montreal, Q.
*Potts, J. M., Belleville, O.

Quirk, E. L., Aylmer, Q.

Reed, T. B., Montreal, Q.
Reid, J. T., Montreal, Q.
Richards, S., Ottawa, O.
Robertson, T. F., Brockville, O.
Robertson, W., Chesterfield, O.
Robertson, E. A., Lennoxville, Q.
Robertson, A. G., Iroquois, O.
Ross, J., Halifax, N.S.
Ross, H. R., Quebec, Q.

Saphir, E. J., Jerusalem H.L.
Shanks, A. L., Huntingdon, Q.
Smith, T. H., North Sidney, C.B.
*Smith, W. D., Plantagenet, O.
Smith, C. F., West Winchester, O.
Smith, A. G., St. Marys, O.
Smithson, R. H., Stillwater, Minn.
Sparling, A. J., Pembroke, O.
Spier, J. R., Lindsay, O.
Springle, J. A., Montreal, Q.
Stewart, W. G., Arundel, Q.
Stewart, A. D., Arundel, Q.

Tackaberry, E. G., Brockville, O.
Telfer, W. J., Burgoyne, O.
Thompson, J. H., Gananoque, O.
Thompson, F. E., Quebec, Q.
Travers, J. B., St. John, N.B.
Treadwell, S. B., St. John, N.B.
Troy, W., Fallowfield, O.
Tunstall, A., Montreal, Q.

Vipond, A. G., Montreal, Q.

Watson, N. M., Williamstown, O.
Weagant, A. A., Hosaie, O.
Webster, R. E., Brockville, O.
Weeks, C. M., Newport, N.S.
Westley, R. A., Lancaster, O.
Wetmore, F. H., Bloomfield, N.B.
Wheeler, C. L., Montreal, Q.
White, D. D., Montreal, Q.
White, J. J., Lancaster, O.
Wilson, W. A., Derby, N.B.
Williamson, H. M., Guelph, O.
Williamson, W. P., Chatham, O.
Wood, W. F., Manoc, O.
Woodruff, E. H., St. Catharines, O.
Woodruff, T. A., St. Catharines, O.
Wylde, C. F., Halifax, N.S.

Yorston, F. S., Truro, N.S.
Young, H. E., Napanee, O.

FACULTY OF ARTS.

Undergraduates.

FIRST YEAR.

Allen, James H.,	West Osgoode, O	James, Kingston G. H.,	Bristol, Eng
Barlee, H. J. W.,	Montreal, Q	Le Rossignol, W. J.,	Montreal, Q
Blunt, Simon B.,	Knowlton, Q	McAlpine, John J.,	Welland, O
Bowes, Edward J.,	Ottawa, Q	McDougall, G. W.,	Montreal, Q
Brown, Percy K.,	Montreal, Q	McGregor, John M.,	Montreal, Q
Buchanan, A. W. P.,	Montreal, Q	McLennan, Malcolm C.,	Camlachie, O
Cameron, Donald E.,	Montreal, Q	McLeod, Norman A. D.,	Lochside, N S
Capel, E. T.,	Montreal, Q	McMillan, James,	Brodie, O
Cole, Arthur A.,	Montreal, Q	Moore, Levi,	Lachute, Q
Colquhoun, Phillip,	Colquhoun, O	Oliver, William,	Rockburn, Q
Cooper, Merrill A.,	Ormstown, Q	Reeves, Arch. C.,	Ormstown, Q
Craik, G.,	Rockburn, Q	Russell, Andrew,	
Dobson, John R.,	Pictou, N S	Smith, Harry E.,	Waterloo, Q
Ellenwood, Wm. R.,	Yarmouth, N S	Tees, John,	Montreal, Q
Flinn, John W.,	Wallace, N S	Walsh, Wm. E.,	Ormstown, Q
Gunn, Wm. Thos.,	Montreal, Q	Warne, James F.,	Eastman, Q
Harris, Wm.,	Brantford, O	Warne, Wm. A.,	Eastman, Q
Hamilton, Dan. S,	Montreal, Q	Whyte, Jas. T.,	Manotick, O
Hipp, E. G.,	Montreal, Q	Young, Henry C.,	North Troy, Vt, US.
Holden, Arthur R.,	Montreal, Q		

SECOND YEAR.

Ault, Percy B.,	Aultsville, O	McVicar, Donald,	Strathroy, O
Berwick, George A.,	Farnham, Q	Mack, Silas W.,	Ayer's Flat, Q
Cameron, John A.,	Huntingdon, Q	Martell, Dan. E.,	Montreal, Q
Colclough, Wm. F.,	St. Catharines, O	Mathewson, George H.,	Montreal, Q
Daley, James,	Stouffville, O	Moore, Saml.,	Mille Isles, Q
Davidson, Peers,	Montreal, Q	Nicholls, Albert G.,	Montreal, Q
Elliott, James A.,	Shawville, Q	Paton, W. E.,	Sherbrooke, Q
Finch, C. W.,	Caledonia, O	Richardson, P. L.,	Lyn, O
Fraser, D. J.,	Alberton, P.E.I	Robertson, Andrew A.,	Montreal, Q
Fry, Fred M.,	Montreal, Q	Ross, Joseph J.,	Dewittville, Q
Hall, Alex. R.,	Montreal, Q	Sutherland, Hugh C.,	Embro, O
Hall, Richard S.,	Montreal, Q	Tolmie, Alexander,	Montreal, Q
Kinghorn, H. M.,	Montreal, Q	Tory, H. M.,	Montreal, Q
McGregor, A. M.,	Montreal, Q	Trenholme, Edward C.,	Montreal, Q
McDougall, Robert,	Ormstown, Q	Walsh, Alex. W.,	Huntington, Q
McDuffee, Lewis P.,	Stanstead, Q		

THIRD YEAR.

Deeks, W. E.,	North Williamsburg, O	Meighen, F. S.,	Montreal, Q
Garth, W. H.,	Montreal, Q	Read, F. W.,	Montreal, Q
Gibson, W. D.,	Morrisburg, O	Robertson, James,	Waddington, N.Y. US
Holden, Donald B.,	Montreal, Q.	Rogers, William,	Lakefield, O
Jamieson, Walter L.,	Montreal, Q	Stevenson, James H.,	South Dummer
McCusker, S. F.,	Hawkesbury, O	Truell, Harry V.,	Stanstead, Q
Mackenzie, R. T.,	Almonte, O	Walsh, Thos. N.,	Ormstown, Q

FOURTH YEAR.

Bryan, Andrew,	Richmond, Q	Giles, Wm. Jas.,	Farmersville, O
Bryson, Alfred P.,	Montreal, Q	Howitt, William,	Guelph, O
Day, John L.,	Montreal, Q	Larkin, Fred. H.,	Halifax, N.S.
England, George Prevost,	Montreal, Q	Le Rossignol, James E.,	Montreal, Q

Lindsay Norman, New Richmond, Q
Macallum, Fred. K. W., St. Elmo, O
McPhail, J. A., Orwell, P.E.I.
Martin, Charles F., Montreal, Q
Mason, Horace E. C., Montreal, Q
Massé, Arthur, Grande Ligne, Q
Morison, John Archd., Ormstown, Q
Naismith, Peter L., Pembroke, O
Pedley, Hilton, Cobourg, O
Sweeny, George R., Montreal, Q
Thurlow, H. M., Ormstown, Q

Partial and Occasional.

Austin, James M., Belleville, O
Beattie, John M., Mille Isles, Q
Bessey, Wm. N., Montreal, Q
Black, John F., Colquhoun, O
Bouchard, Louis R., Sherbrooke, Q
Brown, Daniel,
Caldwell, Henry, Carney, O
Campbell, D., Montreal, Q
Charters, Frank, Montreal, Q
Clark, Hugh A., Montreal, Q
Cleary, J. R. S,
Cook, Wm. A., Montreal, Q
Cory, Thomas T., Montreal, Q
Davey, Frank, Montreal, Q
Deeprose, Charles S, Montreal, Q
Dixon, James C., Montreal, Q
Dougall, G. M., Montreal, Q
Ellicott, T. W. H., Montreal, Q
Francesco, C. B, Montreal, Q
Fraser, Alexander D., Dundee, Q
Galley, Andrew, Montreal, Q
Giroulx, Louis, Ottawa, O
Graham, George D., Hull, Q
Graves, B. T.,
Gunn, A. D., Nova Scotia
Hastings, John C, Sweetsburg, Q
Hausen, J. F., Montreal, Q
Higgins, Joseph, B.A., Brucefield, O
Johnston, Robt, B.A., Kincardine, O
Johnston, George F., Chesterville, O
Judge, Percival E., Montreal, Q
Kalem, Hagop T., Montreal, Q
Kennedy, John, Conn. Co. Wellington
Kenyon, J. H. P. Montreal, Q
Lambe, W. D., Montreal, Q
Lane, Swithin, Montreal, Q
Lee, Wilberforce, Toronto, O
Long, James A., Lavender
Lucas, M. L., Montreal, Q
MacCallum, Chas. A., Montreal, Q
McFarlane, —
McGregor, Peter, Bogart, O
McKelvie, George, Montreal, Q
McLeod, J. W., Kirkhill, O
Manning, C. E., Montreal, Q
Medd, Emmanuel, Montreal, Q
Meyer, Fred. W. A., Montreal, Q
Mitchell, Wm. A., Drummondville, Q
Mitchell, Thos. A., Linder, N.S.
Montgolfier, Leonde, Montreal, Q
Moore, Churchill, Economy, Col. Co., NS
Oaten, Fred. Jonas, Bracebridge, O
Patton, Walter M, Montreal, Q
Rondeau, Saml. P., Joliette, Q
Runions, John W., Northfield, O
Scott, J. Stephen, Montreal, Q
St. Aubin, T,
Smith, George S., Como, Q
Sykes, Chas. A., Cobden, O
Thompson, G. J. A., B.A., Harbor Grace, Nfld.
Vessot, Charles H., Egypte de Milton, Q
Walker, Wm. W.
Watt, Wm. Jas., Montreal, Q
Wells. William, Montreal, Q
Whyte, Chas. W., B.A., Montreal, Q
Wood, H. L., Montreal, Q

SPECIAL COURSE FOR WOMEN.

Undergraduates.

FIRST YEAR.

Baillie, Jeanie, F., Putnam Co., Florida, U.S.
Finley, M. L., Montreal, Q
Hall, Bessie, Montreal, Q
McMillan, Helen, Montreal, Q
Mattice, Brenda L., Montreal, Q
Mewhort, Louise, St. Anne, Q
Moffatt, Eva L., Gananoque, O
Mooney, Caroline J., Montreal, Q
Richardson, A. Constance, Montreal, Q
Robinson, Maude Alice, Montreal, Q
Smith, G. Louise, Montreal, Q

SECOND YEAR.

Abbott, Maude M.,	St. Andrews, Q	Macfarlane, Mira,	Montreal, Q
Botterell, H. Inez R.,	Montreal, Q	Scott, Sarah B,	Montreal, Q
Botterell, Jeanie T.,	Montreal, Q	Williams, Annie,	Montreal, Q
Derick, Carrie M.,	Clarenceville, Q		

THIRD YEAR.

Reid, Helen B.,	Montreal, Q	Wilson, Alice Maud,	Montreal, Q
Squire, Maude M.,	Gananoque, O		

FOURTH YEAR.

Cross, Eliza C.,	Lachine, Q	Murphy, Martha,	Montreal, Q
Evans, Blanche B.,	Montreal, Q	Murray, Alice,	Montreal, Q
Hunter, Georgina,	Montreal, Q	Palmer, Jane V.,	Ottawa, O
Maclee, Donalda,	Montreal, Q	Ritchie, Octavia,	Montreal, Q

Partial.

Beard, H. F.,	Montreal, Q	Macrae, Mabel,	Montreal, Q
Claxton, C. L.,	Montreal, Q	Redpath, A. E.,	Montreal, Q
Evans, Mabel N.,	Montreal, Q	Scott, M. L.,	Montreal, Q
Kennedy, L. Marion,	Montreal, Q	Turner, Edith,	Montreal, Q
Kirk, Bertha,	Montreal, Q	VanHorne, A.,	Montreal, Q

Occasional.

Archbald, L. G.,	Montreal, Q	McLea, Rosalie,	Montreal, Q
Ayer, A. A.,	Montreal, Q	Michaels, Nancy,	Montreal, Q
Bagg, H. F. M.,	Montreal, Q	Millan, Sarah,	Montreal, Q
Bazin, M. J,	Montreal, Q	Mills, Alice Chester,	Montreal, Q
Bazin, L. C.,	Montreal, Q	Moffatt, Clara,	Montreal, Q
Beveridge, A. B.,	Montreal, Q	Murray, Edith A. P.,	Montreal, Q
Blackader, Helen,	Montreal, Q	Norman, Charlotte,	Montreal, Q
Claxton, A. M.,	Montreal, Q	Palmer, E. C.,	Wilkesbarre, Pa.
Claxton, Fannie,	Montreal, Q	Pangman, F. B.,	Montreal, Q
Cowie, E.,	Montreal, Q	Phillips, S. A.,	Montreal, Q
Dawes, C. M.,	Lachine, Q	Power, Florence,	Montreal, Q
Denoon, Annie,	Montreal, Q	Rae, Mabel,	Montreal, Q
DeWitt, Emily F.,	Montreal, Q	Redpath, Alice E.,	Montreal, Q
Douglas, A. M.,	Montreal, Q	Redpath, A. M.,	Montreal, Q
Ferrier, Florence M,	Montreal, Q	Redpath, Amy,	Montreal, Q
Finley, Mary S.,	Montreal, Q	Samuel, C. I.,	Montreal, Q
Gifford, Miriam C.,	Montreal, Q	Savage, J.,	Montreal, Q
Jamieson, H. L.,	Montreal, Q	Starke, I.,	Montreal, Q
Johnson, H.,	Montreal, Q	Scott, Anna G.,	Montreal, Q
Johnson, N.,	Montreal, Q	Scott, Marguerite L.,	Montreal, Q
Kennedy, M. L. S.,	Montreal, Q	Scott, M. M.,	Montreal, Q
Kinloch, J.,	Montreal, Q	Skelton, A. R,	Montreal, Q
Krusé, Amanda B.,	Montreal, Q	Skelton, Emma,	Montreal, Q
Lawford, Annie,	Montreal, Q	Stevenson, Mildred S.,	Montreal, Q
Lawford, Frederica E.,	Montreal, Q	Stevenson, Winifred T.,	Montreal, Q
Lawless, Lucinda E.,	Montreal, Q	Tatley, Henrietta,	Montreal, Q
Lewis, E.,	Montreal, Q	Taylor, Mary,	Montreal, Q
McBratney, Jessie M. T.,	Montreal, Q	Trenholme, Lucy H.,	Montreal, Q
MacCallum, Mary,	Montreal, Q	Turnbull, Laura,	Montreal, Q
McCaul, Annie,	Montreal, Q	Vipond, Minnie,	Montreal, Q
Macfarlane, J. J.,	Montreal, Q	Wand, Emily May,	Montreal, Q
Macfarlane, Sarah K. B.,	Montreal, Q	Wand, M. E.,	Montreal, Q
McFee, Elizabeth,	Montreal, Q	Williams, E,	Montreal, Q
McLaren, A.,	Montreal, Q	Wills, L.,	Montreal, Q
McLaren, M.,	Montreal, Q	Young, Alice,	Montreal, Q

MORRIN COLLEGE, QUEBEC.

Undergraduates.

Macleod, Euphemia,	Quebec	McCullough, Robert,	Inverness, P Q
Sloane, Edith Jane,	Quebec	Anderson, Duncan P.,	Levis, P Q
Lamont, John J.,	Marsden, Q	Smith, George H.,	Hawkesbury, Ont
Whitelaw, James Menzies,	Valcartier, Q	McCord, W. Walter,	Quebec
Robertson, Adam,	Edinburgh, Scotland	Tanner, John F. E.,	Levis, P Q
Laurie, Archibald,	Quebec	Fisher, Ethel Wand,	Quebec
Craig, Hugh,	Marlow, P Q	Hale, Edward Rupell,	Quebec
Hunter, Alexander,	Inverness, P Q	Lindsay, John,	Danville, P Q
Jamieson, William J.,	Inverness, P Q	Brown, Martha Lucinda,	Quebec
Jamieson, David M.,	Inverness, P Q	Logie, Edward S.,	Leeds, P Q
Blue, John H. F.,	Metis, P Q	Webb, Jas. Douglas,	Quebec
Desbrisay, Charles T.,	Jacquet R., N B	Pidgeon, George Campbell,	Maria, P Q
Livingston, Neil.	Hampden, P Q	McLeod, Thomas,	G.J.McT.Chatham, NB
Brodie, Charles E.,	Quebec		

ST. FRANCIS COLLEGE, RICHMOND.

Undergraduates.

Jones, Arthur G.,	Richmond, P Q	Reid, W. D.,	Leeds, P Q
Elliott, E. A.,	Ulverton, P Q	Moore, A.,	Kingsey, P Q
Bowden, W.,	Richmond, P Q	Whyte George,	Leeds, P Q
McKenzie, R. A.,	Melbourne, P Q	McLeay, A. A.,	Danville, P Q
McHagg, R. J.,	Leeds, P Q	Hume, G. L.,	Montreal, Q
Farnsworth, A.,	Eaton, P Q	McConnell, J. H.,	Leeds, P Q
Dresser, J,	Cleveland, P Q		

FACULTY OF APPLIED SCIENCE.

FIRST YEAR.

Bulman, W. J.,	Sweetsbury, Q	Russel, W.,	Pembroke, O
Clemence, A. B.,	Preston, O	Stone, E. A.,	Montreal, Q
Middleton, P. H.,	Montreal, Q	Schwitzer, J. E.,	Ottawa, O
Ramsay, H. M.,	Cote St. Antoine, Q	Walker, W. H. H.,	Montreal, Q
Russel, H. Y.,	Montreal, Q.	Wingham, T. H.,	Montreal, Q

SECOND YEAR.

Calvert, S.,	Rochdale, Eng.	Mattice, E. S.,	Cornwall, O
Denison, W. S.,	Denison's Mills, Q	Mooney, G. W.,	Montreal, Q
Ellacott, C. H.,	Cote St. Antoine, Q	Redpath, P. W.,	Montreal, Q
Evans, P. N.,	Montreal, Q	Rexford, O.,	Knowlton, Q
Hawkins, A. H.,	Listowel, O	Shuttleworth, A. E.,	Mount Albert, O
Jamieson, R. H.,	Montreal, Q	Smith, G.,	Petitcodiac, N.S.

1887-8

THIRD YEAR.

Addie, G. K.,	Sherbrooke, Q	McLennan, M. J.,	Williamstown, O
Antliff, J. H.,	Montreal, Q	Naismith, P. L.,	Pembroke, O
Edwards, G. M.,	Montreal, Q	Strong, A. W.,	Summerside, P.E.I.
Hersey, M. E.,	Montreal, Q	Tuplin, J. P.,	New Annam, P.E.I.
McFarlane, M. C.,	Almonte, O	Young, A.,	Almonte, O

FOURTH YEAR.

Childs, A. E.,	Montreal, Q	Macnutt, C. H ,	Ottawa, O
Drummond, A. L.,	Montreal, Q	Ogilvy, R. F.,	Montreal, Q
Eneas, A. G.,	Montreal, Q	Roy, F. X. A.,	Montreal, Q
Hamilton, W. J.,	Montreal, Q	Tremblay, A. J.,	St. Roch des Aulnets Q
Hopkins, M. W.,	Stoney Creek, O	Walters, C. L.,	Montreal, Q
Lovelace, E. S. M.,	Longueuil, Q		

PARTIAL.

Austen, A. F. B.,	Thessalon, O	McKercher, John	Glengarry, O
Brown, J. C.,	Montreal, Q	McMillan, N. J.,	Montreal, Q
Blomeley, A. Y.,	Montreal, Q	MacFarlane, W. D.,	Cote St. Antoine, Q
Clark, J. H. A.,	Montreal, Q	Monk, W.,	Montreal, Q
Fraser, W. F.,	Pembroke, O	Mather, C. D.,	Kincardine, O
Fournier, P. J.,		Reed, C. B.,	Montreal, Q
Goulet, J. A. G.,	St. Eustache, Q	Reekie, R. J.,	Cote St. Antoine, Q
Giles, W. J.,	Farmersville, O	Stuart, H. B.,	Montreal, Q
Klock, A.,	Ottawa, O	Smaill W.,	Montreal, Q
Le Rossignol, J. E.	Montreal, Q	Turner, J. A.,	Hamilton, O
Lucas, W. V. N.,	Montreal, Q	Williams, M. L.,	Montreal, Q

SUMMARY.

Students in Law, McGill College		17
" in Medicine "		220
" in Arts "	Undergraduates	103
	Partial and Occasional	66
" Special Course for Women—		
	Undergraduates	29
	Partial	10
	Occasional	70
" in Applied Science,	Undergraduates	43
	Partial	22
" in Arts, Morrin College, Undergraduates		27
" " St. Francis College, Undergraduates		13
Total number of Students		620
Deduct entered in two Faculties		4
		624
Teachers-in-training in Normal School		108
Pupils in Model Schools		368
Total Students and Pupils		1100

Higher Examination of Women.

SENIOR ASSOCIATES IN ARTS.

1880.

GEORGINA HUNTER, MONTREAL.

1881.

MARGUERITA FRANCIS, MONTREAL.

1885.

AGNES E. LIVINGSTONE, ST. JOHN, N.B.

School Certificate of the University.

ASSOCIATES IN ARTS.

1865.

Montgomery Jones
John Ferguson
Charles Cushing
Robert H. Conroy
Samuel Stevenson
Wallace Clarke
Frederick W. Evans
Robert W. Forrester
Edward B. Greenshields
Montgomerie Lewis
George Joseph Bull
Albert Murray
Daniel McLachlan

1866.

Sidney Arthur Fisher
Charles E. Porteous
Will. W. Walkem
Charles G. Stewart
Geoffrey W. Porteous
Florence David
Hew D. Whitney
George W. Torrance
Robt. M. Esdaile

1867.

Charles H. Ferry
James Rodger
Geoffrey W. Porteous
Thomas C. Thompson
Francis J. Shepherd
Gerald Lloyd

1868.

John Fraser Torrance
Will. Osborne M. Cross
Henry G. W. Badgley
John B. Abbott
John Gray Grant
Thomas C. Hempstead

1869.

Arthur F. Ritchie
Simon J. Tunstall
Charles R. Jones
O'Hara Baynes
Aaron D. M. DeSola
Charles Jas. Fleet
John Thos. Caldwell

1869.—*Continued.*

James M. Mitchell
John Kay
James Green

1870.

William Bell Dawson
Archibald D. Taylor
Hiram B. Stephens
Henry W. Thomas
Samuel Greenshields
Sheringham A. Shepherd
William McEachran
David S. Robertson

1875.

William D. Lighthall
W. A. Farwell
Robert T. B. Howard
Charles A. Molson

1876.

J. Herbert Darey
Paul Theodore Lafleur
Edwin Hudson Bisset
Andrew G. Ross
James R. Foster
Frederick Mindon Cole
William Dawson McGregor
John Ewart
J. Gordon Gibson
Wilfred T. Skaife
Charles J. Walker

1877.

Alexander Falconer
Thomas B. Macauley
Armand F. Teefy
Mina Douglas
M. Stuart Fraser
William Martin
Walter H. Snow
Louisa McFee
Margaret A. Mills
Ida Papineau
Walter E. Lyman
Helen Macklen
Jane Darling
George Graham
Murray A. Biggar
Jessie Ross
Eva Dawson
Alice Cumming
Kenneth R. Macpherson
Walter H. Lancey
Robert A. Wallace
Alexander McGibbon
Marietta Jones
Frank Weir
Nathaniel D. Drew

1878.

Henri A. Lafleur
Grace Darling
Henry R. Fairclough
Andrew Lawson
William H. Boyle
N. J. Rielle
George Kapelle
John B. Rose
Lillian Martin
Henry Cockfield
Louisa Harrison
David Young
Lawrence C. Rose
Jessie Radford
Kate McKeand
Maggie Stewart
Maggie Campbell
A. W. Martin
Florence W. Bisset
C. W. Trenholme
Robert Stirling
Maggie White
Frederick E. Belcher
Anna Baxter
Minnie Greenshields
Emma D. Meikle
C. D. Godfrey
Lawrence MacRae
Neil McLennan

1879.

James Charles Allan
Charles Edward Bland
George W. Hambly
John C. Fields
B. Norman Hudspeth
Louisa McDonald
Wyatt G. Johnston
Robert Little
Henry J. H. Petry
Edward J. K. Noyes
Edith Durdan
Adolph Craft
Richard F. Morris
William Morris
Duncan D McTaggart
Archibald McK McMechan
Donald John Fraser

1879.—*Continued.*

John Coutts
Thomas Crawford
Jessie McConnell
Devereux Emmet
Alfred E. A. Barlow
Elizabeth Smith
Claude L. Wheeler
Charles McP. Holt
Maggie Osgood
George S. Baker
Arthur G. Weld
William L. Murray
Christina J. Galt
George R. Mill
Alexander Malcomson
Thomas J. Tait
Kenneth D. Young
Albert W. Haldimand

1880.

Edward H. P. Blackader
William Logan
Mary J. MacCallum
Walter H. Turner
Minnie H. McKean
Mary B. Badenach
Wm. C. Morrison
Robert C. Kirkpatrick
Julius T. Gnaedinger
Richard S Kinghorn
Jean W. Johnston
Norman R. Macaulay
Hugh McLennan
William Cherrie
Eugene McMullan
Elena C. Livingston
William Christie
James C. McNaughton
Lyman Duff
John D. Courtney
Maud M. Lamb
William Gibson
James B. Gibson
Frank Baker

1881.

Frank P. Bernard
Charles R. Daoust
Frederick L. Barlow
Percy E. Judge
Peter C. Mitchell
Alexander J. Tolmie
William Mitchell
Edward P. Mathewson
Henry Munderloh
Ellen E. Coo
Wilfred R. Morris
John J. Arnton
Hanbury A. Budden
Manson D. Teezel
William T. Gunn
George H. Guy
Charles Burkholder
William M. Reid
Phillip M. Robertson
Percival Tibbs
William Reid
Ellen F. Kemp
Grace Foster
Alice M. Cook
James W. Morrice
Ridley L. Charlton
James H. Bissett.
Andrew Stuart
Mary E. Clunie
Archibald Robertson
Arthur A. Irwin

1882.

Albert G. B. Claxton
Philip E. Ritchie
Alexander R. Johnson
John G. G. Kerry
William S. Leslie
Nevil N. Evans
Charles P. Brown
Walter F. Ferrier
Thomas J. Vipond
Charles J. Robertson
William H. Evans
John T. Crawford
Robert S Ross
Ronzo H. Clerk
Arthur Weir
William A. Home
Adelaide M. Bastable
James R. Kinghorn
Frederick H Johnson
Orrin Rexford
Leslie G. Craig
Marion Taylor
Flora Taylor
William Hilton
Cecil M. Maxwell
Ernest Munro
Brain H. Wand
William A. Logie
William A. Fyles
Mary H. Ellicott
Harriet A. Darey
Mary J. Metcalfe
Emily F. Gross
William H. Bentley

1882.—*Continued.*

Ernest L. Allard
Florence N. Wilson
George H. Dawson
James Laurie
Elizabeth Christie
Elizabeth Donnelly
Alice M. Wilson
Laura M. McLaren
Mary E. Meikle
Christina Wilson
James H. Woods
Phoebe E. Elliott
Ida F. Smith
Jane M. Bremner

1883.

Meredith O. Smith
Wellington A. Cameron
Hugh M. Patton
Annie C. McGregor
Hubert D. Hamilton
Henry W. Welch
Rowland S. Hill
Joseph C. Barlow
Ellen M. Clunie
Arthur D Fry
Albert H Campbell
Alexander T. Galt
Albert E. Holt
Alfred P. Murray
Geo. A. Clunie
Howard D. Kemp
Samuel Cumming
Wm. J. Carmichael
Charles B. Kingston
Helen B. Blackader
Mabel Aldrich
Charles L. Walters
Robert B. Henderson
Henry G. McLaren
Wm. A. Nichols
Edith Turner
Alexander McLennan
Geo. S. Cantlie
Lawrence A. Darey
Andrew B. Clark
Peter Reid
Neil B. McTaggart
Mattie C. Murphy
Alfred P. Bryson
Graham B. Macpherson
Ada A. McGowan
Thomas R. Henderson
Robert M. Campbell

1884.

Rosaline McD. McLea
Octavia G. Ritchie
John L. Day
Charles R. Hamilton
Henri G. Joly
James E. Le Rossignol
Charles B. Gordon
Charles J. F. Martin
Helen R. Y. Reid
Wm. C. G. Heneker
Edward A. Robertson
Mary E. E. Hunt
Charles C. Smith
Alice J. Murray
Jessie W. Stewart
F. H. Pickel
George R. Kinloch
Emily C. Forbes
W. Archibald H. Kerr
George Lyman
Alexander M. Jeffrey
Lillias S. Molson
Hattie W. Bennett
John Paterson
Robert H. Reid
Edmund H. Duval
Walter L. Jamieson
Reginald D. Dyer

1885.

George M. Edwards
William Robertson
Ada V. Alexander
Walter Binmore
Frank S. Meighen
Harold B. D. Campbell
David Grant
Maude E. Abbott
John W. Ross
David D. J. White
Mabel N. Evans
Edgar A. Grafton
Elizabeth M. Cochrane
Caroline H. Marshall
Ellen M. H. Stevens
Kate M. Bott
Alexander W. Walters
William M. Birks
Victor C. Buchanan
Minnie M. Howe
Clara F. M. Davidson
Walter D. Macfarlane
Thos. R. McInnes
Mary H. Henderson

1885.—*Continued.*

Maude S. Gibsone
Robert H. Berwick
Janie T. Black
Eleanor McD. Campbell
John H Dunlop
Annie M. Kyle

1886.

Annie Williams
Albert G. Nicholls
Albert F. Winn
Percy N. Evans
A. Armour Robertson
Sara B. Scott
Thomas B. Reed
Hugh M. Kinghorn
James B. Mitchell
Inez H. R. Botterell
George W. Mooney
Sydney L. N. Ussher
Edward C. Trenholme
Jeannie T. Botterell
Peers M. Davidson
Harry R. Jamieson
M. Mira Macfarlane
Frederick M. Fry
Henry Lemesurier
Arthur J. Whitham
George H. Mathewson
Lizzie B. McGregor
Levi Moore
Helen R. Day
Walter E. Cushing
William Monk
Gerald F. Hibbard
Mary E. Bond
Persis J. Lothrop
Florence B. Pangman
Frederick A. Fothergill

1887.

Walter J LeRossignol
J. Murray McGregor
E. Albert Stone
Florence S. Day
Edward W. Archibald
Katherine M. Campbell
Henry H. Walker
Wilfrid V. Lucas
Wilfrid J. Mitchell
Gordon W. McDougall
George B. McLeod
Arthur A. Cole
Arthur R. Holden
Hugh Russell
Hildagarde F. Beard
John Tees
Somerled L. Paterson
Pemberton Smith
Nicholas Shearly
Georgina L. Smith
Jeanie F. Baillie
Agnes S. James
Amanda B. Krusé
Margaretta L. Finley
Maude A. Robinson
Louise S. Mewhort
Ernest R. Ebbitt
Percy H. Middleton
Harry E. Smith
Bowyer S. Smith
Clement B. Wright
R. H. Barron
Carlisle T. Pemberton
James F. Warne
William Oliver
George C. Smith
May M. Cutting
Lucy Pomeroy
Grace C. Lamplough
Westley A. Tester
A. Constance Richardson
Maggie E. Barron
John H. McAlpine
William T. H. Ellicott
Julia Armstrong
James Bennie
Simon B. Blunt
Percy K. Brown
Merrill Cooper
John Dresser
Albert H. Farnworth
Erastus E. Howard
Newton Kerr
Simeon Martin
Thomas E. Montgomery
Caroline J. Mooney
May G. Murphy
Frank D. Parmelee
Archie Reeves
William D. Reid
Maggie Shepherd
Myran E. Thomas
William Walsh

JUNIOR CERTIFICATES.

1875.

Charles F. Dawson
William C. Norris
William S. Kerry
Frank D. Adams

1876.

William R. Robertson

1877.

Annie Cusack
Lizzie Cox
Ella Gardiner
Elizabeth Monk
Jessie Logan
Alexander W. Richardson

1878.

George Ross
David McKinnon
Jane Wood
Annie Troup
Jennie Edgar
Edwin W. Griffin
Mary Troup
Herbert R. Macaulay
Jessie Stewart
Alexander Ambrose
Milton Vandewater
Mulie Somerville
Maggie Osgood
Fritz G. Gnaedinger
Robert A. Elliott
Dora Scott
Frederick Kingston
William H. Adams

1879.

Margaret McCoy
Ida Sutherland
Hattie Dally
Grace Darling
Margaret Wilson
Augusta Pederson
George Corey Thomson
Georgina Iles
Mary Mitchell
Arthur Mercer

1880.

Jessie S. Greenshields
William Graham
Bertha Savage
Ellie M. Cole
David Ogilvie
Jeannie Ross
Lorrie Dickson

1881.

Annie B. Barr
Agnes H. Fairbairn
John S. Cassils
Martha Martin
Mary C. Greer
Jeannie Dickson
Ernest Allard
Nellie Hall
Henry Allen
J. W. H. Milne

1882.

Cora Comfort
William F. Graham
Annie Munro
Daniel Taylor

1883.

John Coon
Albert E. Botterell
Annie Murphy
E. Herbert Stafford
Lucie E. Ives

1884.

Francis H. Hadley
Arthur L. Crawford
Alexander F. Mitchell
Frederick A. Stabb
Minnie M. Howe

1885.

Isabel M. M. Campbell
Margaret Murchie

1886.

Richard McBride.

1887.

Henry E. Burstall
Addé Wells
Howard Honeyman
George White
Paul H. Knowlton
John Gleason
D. Norman MacVicar
Susan Carter
Nina M. Pickle

STANDING IN THE EXAMINATIONS, 1888.

ASSOCIATES IN ARTS.

I. Candidates under 18 years of age, in order of merit.

No.			
6.	*William H. S. Kollmyer (High School, Montreal),	1299	Marks.
12.	*George D. Robins (High School, Montreal),	1153	"
3.	*Harold B. Cushing (High School, Montreal),	1123	"
10.	*Robert W. Mitchell (High School, Montreal),	1116	"
25.	‡A. Gertrude Hadley (Girl's High School, Montreal),	1065	"
36.	†John G. L. Abbott (Lincoln College, Sorel),	1037	"
2.	†William N. Cunningham (High School, Montreal),	1033	"
32.	‡Alice M. Whitehead (Girl's High School, Montreal),	1014	"
5.	†James S. Ereaux (High School, Montreal),	1013	"
1.	†Charles F. Crutchlow (High School, Montreal),	1011	"
42.	†Howard Buck (Bishop's College School, Lennoxville),	992	"
92.	*Arthur B. Wood (High School, St. Johns),	984	"
22.	‡Maria Cox (Girls' High School, Montreal),	972	"
7.	†Charles M. Howard (High School, Montreal),	962	"
153.	‡Mabel A. Boright (Sutton Academy),	949	"
8.	*Evander J. MacIver (High School, Montreal),	928	"
4.	*Maurice B. Day (High School, Montreal),	925	"
16.	*Henry S. Shaw (High School, Montreal),	924	"
17.	*Walter H. Smyth (High School, Montreal),	920	"
14.	*William Russell (High School, Montreal),	919	"
28.	Edith M. Millar (Girls' High School, Montreal),	916	"
157.	‡Mary Johnstone (Girls' High School, St. John, N.B.)	912	"
43.	*Lorne Drum (Bishop's College School, Lennoxville),	903	"
41.	‡Annie L. Jackson (Misses Symmers & Smith's School),	893	"
13.	†Frank D. Rogers (High School, Montreal),	874	"
90.	*William D. Armitage (Shawville Academy),	870	"
21.	Frances R Angus (Girls' High School, Montreal),	856	"
76.	‡Eleanor Frances Sleeper (Coaticook Academy),	852	"
156.	‡Alice K. Walker (Girls' High School, St. John, N.B.),	846	"
15.	†Forest Rutherford (High School, Montreal), } eq.	844	"
52.	*George Whyte (St. Francis College School), }		
29.	Isabella Ogilvy (Girls' High School, Montreal),	839	"
159.	‡Harriet Clark (Girls' High School, St. John, N.B.),	837	"
40.	‡Milda E. Leach (Misses Symmers and Smith's School), } eq.	836	"
155.	*Edward A. Cutter (Sutton Academy), }		
158.	‡Edith L. Hanington (Girls' High School, St. John, N.B.),	833	"
44.	†Henry Tofield (Bishop's College School, Lennoxville),	803	"
154.	*Homer M. Jaquays (Sutton Academy),	800	"

64. ‡Alice Robinson (Stanstead Wesleyan College), 792 Marks.
54. *Alexander R. Pennoyer (St. Francis College School), 770 "
31. Jessie K. Ross (Girls' High School, Montreal), 753 "
18. †Frank H. Wilson (High School, Montreal), 738 "
69. ‡Lily M. A. Adair (Three Rivers Academy), } eq. 683 "
145. *Ernest D. Aylen (Lachute Academy), }
113. *Harold C. L. Young (High School, Quebec), 671 "
78. Cecil Sleeper (Coaticook Academy), 668 "
37. †W. Angus Ward (Private Tuition), 667 "
68. ‡Frances M. Houliston (Three Rivers Academy), 663 "
11. Arthur D. Moss (High School, Montreal), 613 "
91. †Harry A. Naylor (Shawville Academy). 563 "

II. Candidates over 18 *years of age, in alphabetical order.*

51. ‡Alice M. Bannister (St. Francis College School).
132. *J. Keir Bennie (Huntingdon Academy).
130. *Harry Blachford (Huntingdon Academy).
80. *George A. Bowen (Coaticook Academy).
135. Jennie Cunningham (Huntingdon Academy).
131. *Allan Fraser (Huntingdon Academy).
33. Mary O. Galt (Girls' High School, Montreal).
127. ‡Christine Lighthall (Huntingdon Academy).
84. ‡Cora A. Manning (Clarenceville Academy).
126. ‡Emma C. McCoy (Huntingdon Academy).
72. †David S. Moffat (Inverness Academy).
77. *Edwin G. Parker (Coaticook Academy).
115. ‡Nina M. Pickle (Waterloo Academy).
34. ‡Ethel G. Raynes (Girls' High School, Montreal).
71. *Stuart Robinson (Inverness Academy).
143. *David A. Rodger (Lachute Academy),
128. Nancy Ruddock (Huntingdon Academy).
129. *Thomas Sadler (Huntingdon Academy).
74. ‡Anna A. Stenning (Coaticook Academy).
144. *James Thompson (Lachute Academy).
87. James A. Young (Clarenceville Academy).

JUNIOR CERTIFICATES.

I.—*Under* 18.

23. Susie J. Gilmore (Girls' High School, Montreal), 687 Marks.
50 Hortense C. Fraser (St. Francis College School), 677 "
116. George F. Allen (Waterloo Academy), 675 "
55. Norton C. Lyster (St. Francis College School), 604 "
83. Annie M. Donally (Clarenceville Academy), 567 "

166.	Jennie Hodgins (Shawville Academy),	560 Marks.
141.	Charles D. White (Sherbrooke Academy),	531 "
89.	Edith M. Forrest (Compton Ladies' College),	514 "
88.	Charlotte E. Carter (Compton Ladies' College),	513 "
93.	William S. Johnson (St. Johns High School).	425 "

II.—*Over* 18.

117. Henry W. Blunt (Waterloo Academy).
133. Ernest A. Davis (Huntingdon Academy).
134. Margaret McCracken (Huntingdon Academy).
53. A. A. McLeay (St. Francis College School).
119. Mary A. Young (Waterloo Academy).

*May, without further examination, matriculate in Arts or Applied Science.
† do in Applied Science, only.
‡ do in Arts (McGill).

STANDING IN THE SEVERAL SUBJECTS.

[The numbers correspond with those in the preceding list. Candidates whose numbers are in parentheses are equal in standing. Those preceding an asterisk have obtained at least two-thirds of the marks, those following at least one-third. Numbers 1-18 are from the Montreal High School; 21-34 from the Girls' High School, Montreal; 36 from Lincoln College, Sorel; 37 from Private Tuition; 38-41 from the Misses Symmers and Smith's School, Montreal; 42-44 from Bishop's College School, Lennoxville; 50-55 from St. Francis College School, Richmond; 60, 61 and 63-67 from Stanstead Wesleyan College; 68-70 from Three Rivers Academy; 71, 72 from Inverness Academy; 73 from Dunham Academy; 74-80, and 163 from Coaticook Academy; 81-85 and 87 from Clarenceville Academy; 88-89 from Compton Ladies' College; 90, 91 and 164-167 from Shawville Academy; 92-95 and 97-99 from St. Johns High School; 101, 102, and 104-113 from Quebec High School; 114-119 and 121-124 from Waterloo Academy; 126-135 from Huntingdon Academy; 139-140 from Lacolle Academy; 141, 142 from Sherbrooke Academy; 143-152 from Lachute Academy; 153-155 from Sutton Academy; 156-159 from St. John (N.B.) Girls' High School; 160, 161 from Cowansville Academy; 162 from Cookshire Academy].

I. *Preliminary.*

Reading.—[At Montreal.—38, (30, 36). (1, 28, 33, 39), (21, 26, 34), (8, 18, 25, 31, 37, 40), (4, 10. 29. 25), (6, 24), (11. 17), (2, 12, 16), (7, 13, 22, 27), (3, 5, 9, 14, 15, 23, 32).]. [At Lennoxville.—(42, 43, 44)]. [At Richmond.—(50, 51), (52, 54), (53, 55)]. [At Stanstead.—(60, 64) (61, 65, 67, (63, 66)]. At Three Rivers.—(68, 69), 70]. [At Inverness.—72, 71.] [At Dunham.—73] [At Coaticook.—(74, 75, 76), (77, 78, 79, 80), 163]. [At Clarenceville.—81, 87, 82, 84), 83, 85]. [At Compton.—(88, 89).] [At Shawville.—90, 166, 91, 165, 167, 164]. [At St. Johns.—(94, 97), 92, (93, 98), (95, 99.)] [At Quebec.—(104, 109), (108, 110, 112, 113), (107, 111), 106, (101, 102)]. [At Waterloo.—(115, 119, 121, 122, 123). (114, 116, 117, 118), 124]. [At Huntingdon.—(127, 132, 135), (126, 128, 129, 130, 133, 134), 131]. [At Lacolle.—140]. At Sherbrooke.—141, 142]. At Lachute.—(114, 149, 150), (143, 151), (145, 152)]. [At Sutton.—(153, 154, 155)]. [At St. John N.B.—(156, 157, 158, 159)]. [At Cookshire.—162]*

Writing.—(34, 41, 50, 63, 65, 75, 81, 90, 109, 114, 119, 121, 134, 135, 150, 156), (5, 16, 28, 29, 32, 43, 51, 61, 68, 69, 78, 79, 82, 83, 84, 88, 89, 97, 99, 102, 104, 108, 111, 115, 123, 124, 126, 127,

140, 141, 149, 153, 158, 159, 165), (4, 6, 10, 14, 15, 18, 22, 24, 25, 27, 33, 37, 38, 40, 52, 54, 60, 64, 66, 74, 76, 80, 87, 92, 98, 117, 128, 129, 131, 132, 139, 142, 144, 152, 162, 166),* (9, 13, 21) 23, 67, 112, 113, 116, 118, 122, 143, 145, 155) (1, 2, 7, 8, 11, 12, 17, 26, 42, 44, 55, 70, 72, 77) 85, 91, 94, 95, 107, 130, 151, 154, 157, 167), (3, 30, 31, 36, 39, 53, 71, 93, 101, 105, 106, 110, 133, 164).

Dictation.—(42, 51, 132), (26, 40, 41, 127, 156, 158, 159), (3, 7, 8, 12, 28 30, 36, 38, 50, 64, 71, 72, 129, 155), (17, 22, 25, 29, 39, 69, 77, 88, 98, 130, 143, 153, 162) (2, 6, 10, 11, 33, 34, 126, 157), (16, 21, 24, 27, 32, 37, 61, 84, 90, 109, 134, 135, 160), (1, 14, 54, 63, 80, 87, 93, 106, 114, 122, 150), (5, 23, 66, 78, 91, 92, 94, 110, (18, 31, 43, 52, 68, 113, 115, 116, 139, 161), (117, 144, 149), (4, 81, 121, 140 154, 165), (55, 97, 111, 166), (44, 70, 89, 128, 141, 142), 119, (67, 76, 82), (9, 15, 53, 83, 112, 123, 151), (13, 145), (74, 131, 133.)*

English Grammar.—111, (3, 42), 12, 72, (33, 43, 71, 153), (7, 30, 34), (2, 6, 51. 127), (26, 39, 41), (1, 15, 28, 36, 132, 160), (8, 16, 17, 27, 55, 68, 156), (5, 10, 40, 52, 126, 157), (9, 21, 25, 29, 31, 38, 69, 70, 74), (44, 50, 60, 122), (64, 76, 78, 128, 135, 155. 158), (14, 24, 57, 77, 89), (4, 87, 113, 115, 130),* (65, 84, 92, 114, 118, 119, 129, 143, 145), (22, 32, 61, 66, 101, 144), (11, 18, 23, 53, 81, 83, 88, 134, 141, 154), (54, 63, 67, 90, 116, 121, 162), (112, 117, 164), (102, 163, 166), (80, 109, 110, 131, 159), 167, (13, 79, 82, 85, 91, 95, 133, 149, 150), 123, (93, 161), 98, (124, 142). (94, 106).

Arithmetic.—6, 3, 76, 157, 126, (51, 129, 130, 131), 153, (75, 78, 92, 143), 72, 132, 83, 12, 84, 18, 5, (22, 66, 74, 124, 133), (14, 23, 25, 42, 50, 53, 55, 89, 90, 167), 40, (15, 65, 91, 134, 135), 10, (32, 52, 54, 101, (80, 144, 145, 158, 159), (64, 69), (113, 154), (11, 77, 79, 93, 128), (68, 156, 160), (1, 163), (2, 36, 71), 17, (28, 31, 37, 41, 44, 60, 141) 162, 43, (8, 155, 166), (88, 114, 115, 116, 117, 118, 119, 121, 123 149,), (16, 21, 127, 142, 150), 110, (4, 7, 13, 29, 33, 34, 87).

Geography.—64, (2, 16, 22, 52, 141), (6, 10, 21, 29, 32, 34, 36, 51, 117), (1, 4, 15, 17, 26, 40, 69, 90, 127, 132, 134, 135, 145), (3, 25, 31, 42, 54, 76, 114, 115, 143), (9, 12, 14, 18, 38, 50, 116, 126, 150), (7, 13, 23, 31, 37, 39, 41, 55, 77, 78, 79, 82, 89, 144, 155, 166), (5, 30, 43, 87, 88, 92, 128, 129, 130, 151, 154), (8, 67, 74, 91, 110, 111, 119, 122, 156, 159, 164), (80, 81), (11, 27, 28, 44, 70, 94, 149, 153, 157, 160,) (68, 84, 95, 121, 140, 142, 161, 167), (66, 75, 93, 109, 113, 118, 123), (24, 53, 63, 101, 133, 158). (112, 124) 162, (85, 165),* 152, 102, 106, (60, 104, 139), (83, 105), (65, 98, 107 108), 131, 61, (97, 99).

British and Canadian History.—31, 30, (6. 10), (1, 71), (2, 134), (21, 22, 51), (8, 14, 27), (12, 17, 41, 132), (3, 5, 25, 28,) (32, 135, 153, 159), (15, 33, 37, 127),* (36, 52, 130, 156, 157), (7, 64), (34, 54, 90, 126. 143. 144), (4, 9, 16, 116, 128, 158), (13, 40, 50, 69, 115, 129), (26, 38, 42, 72, 84, 101), (53, 68, 91, 92, 145) (77, 78, 80), (39, 55, 87, 93, 94, 117, 133, 154, 155), (44, 163), (18, 23, 81, 85, 149), (24, 29, 43, 63, 75, 119, 122, 150, 166), 88, 141, 162), (83, 89, 131, 160), (76, 112, 118, 165), (11, 70, 74, 102, 111. 113, 121, 142, 151).

Gospels.—(Creditable answering. in order of numbers).—3, 4, 5, 6, 8, 12, 14, 16, 25, 27, 29, 31, 32, 33, 34, 37, 38, 40, 41, 42, 43, 44, 50, 51, 52, 53, 54, 69, 71, 72. 77, 81, 83, 84, 90, 91, 92, 113, 122, 124, 126, 127, 128, 130, 132, 133, 143, 144, 145, 160, 161*.

II. *Optional.*

Latin (Ordinary).—143, (54, 80, 117). (81, 114), 90, 64, (55, 60), 115, (68, 71, 129, 132), 12, 116, 87, 50, (72, 144), 84,* (126, 153), 122, 83, (91, 166), (130, 145) 150, (131, 155, 163), 65, (79, 85), 149, 61, 142, (69, 74), 151, 79, 119, 154, (141, 167), (93, 121), 95, 165, 94, 82.

Latin (Advanced).—6, 12, 36, 41, 27, 8, (10, 92), 25, 157, 158, 34, 26, 3,* (32, 156). 127, (4 2 2), 16, (17, 77, 159), (40, 76), (42, 51), 52, 109, 78, 37. (30, 39), 38, 14, 53, 44, 111, 1, 31, 112, 43, 9, (5, 75), (110, 113).

Greek (Ordinary).—132, 54, 117, 130. (71, 115, 127), (55, 143). 114, 144,* (129, 155), 133, (87, 153), 154, 85, 116, 126, 84, 163, (79, 81), 131, (82, 90, 118), 145.

Greek (Advanced).—6, 12, 10, 4, 109, 3, 8,* 76, 77, 92, 16, (14, 52), 51, 17, 80, (18, 43), 78, 157 9, (53, 113), 111, 112.

French.—127, 41, 12, 71, 50, 6, (17, 76), (10, 70), 64, 42, (33, 40). 34,* (30, 89), 36 21, (16 69, 153), 7, 158, (15, 39, 156), (68, 72, 87, 159), 155, 132, (2, 3, 26), 43, (8, 92, 130, 154,) (4, 5, 14, 112), 142, (32, 52, 109), (22, 143), (1, 33, 81), (90, 114, 115, 150), (28, 149), (24, 25, 51, 74, 135), (53, 84), 111, 126), 129, 101, (29, 85), (110, 144) (83, 134, 145), (44, 60, 119, 141), (113, 116), (77, 128), (23 31. 8, 78), (88, 102), 79, (11, 13, 63, 80, 124), (18, 122), 27, (61, 65, 117, 166, 167)

German.—29, 33, 24, 21, (2, 28), 42,* (7, 13), 23, 11.

Geometry.—(10, 90), (3, 52), (54, 64), (6, 51, 61), (1, 43), (13, 44, 101), 80, (77, 116), 115, 112, (14, 39, 71, 92), (2, 12, 41, 108, 157), 154, (15, 132,) (81, 129, 144), (134, 166), (5, 36. 42, 53, 65, 153), (8, 83, 155), (4, 156), (7, 9, 30, 89, 133), (16, 29, 69, 109, 145, 159),* (17, 38, 40, 68, 75, 113, 117, 158), (22, 72), (25, 32, 50, 76, 114), (84, 106, 111, 127), (18, 122, 123, 130, 143), (55, 87, 88, 105, 163) (85, 104, 135), (93, 94) (124, 131,, (37, 82, 110, 118, 119), (66, 121, 141, 151), 167, (28, 74), (24, 79, 165), (102, 149, 150), 164, (91, 128), (23, 26, 33, 34, 63, 67, 95, 126, 152).

Algebra.—(6, 12, 15, 18, 23, 36, 51, 75, 76, 92, 114, 126, 130, 133, 134, 135, 143, 153, 157), (3, 13), 71, (17, 22, 25, 29, 61, 81, 129, 154), (54, 155, 159), (5, 80, 132, 167), 74, (39, 90, 119), 121, 77, 84), 52, (4, 72), 16, (117, 163) (33, 78, 115), (65, 111), (7, 42, 156), (28, 141), (30, 116), 123, (1, 88, 118), (53, 60), 127, 69, (32, 68, 113, 128, 131), (9, 50), (10, 87, 166), 112, 2, 41, 121, 101, 124, (14, 38, 55, 165). 12., 26, 27, 11, 145, (140, 144), (40, 91), 63, (64, 158), (67, 79), (37, 106),* 110, (34, 164), 109, 82, (31, 83), 44, 149, 150, 105, 102, 8, 43, 95, 66, (70, 151), 108, 97, 94, 98, 85, 24.

Trigonometry.—36, 132, 22,* 5, 1, (2, 43, 127), 25, 15, (3, 12). 6, 13, 44, 11, (10, 42).

Natural Philosophy.—80, 77, 79.

Geometrical and Freehand Drawing.—36, 32,* 30, 13, 33, 144, 29, (15, 153), (2, 25), (5, 108), 154, 155, 7, 1, (90, 111), 21, (22, 24, 28), 150, 34, (31, 64, 92, 149), 27, 26, (61, 143, 145), 11, 91, 106, 151).

English Language.—6, 21, 30, (8, 34), 29, (1, 28), (10, 26, 32), 25, (3, 27), (4, 7, 22), 31, 5, 14, 33, (12, 17), (9, 16, 24) 15,* (2, 18, 23), 11, 13.

English Literature.—34, 40, (30, 43), 7, 21, 29), 6,* (5, 26), 41, 42, 27, 25, (28, 32), (10, 22), (71, 127), 12, 2, 36, (3, 33), (31, 132), 39, 38, (44, 72), (8, 153), (4, 50, 64, 158), (15, 52, 54, 163), 155, (77, 157), (112, 129), (51, 78, 91, 115, 130, 131, 154), (1, 13, 37).

History.—(27, 33), 32, 40, (1, 25), 31, (6, 10, 14, 34, 127) 37, 3, (2, 12, 15), (8, 17),* (5, 153, 89, 44, 42, 71, (9, 41), (26, 158), (16, 43, 159), (4, 77, 129, 157), (132, 13 4), (72, 126, 128, 156), (130, 143), 38, (7, 144), (39, 80, 84, 90, 135) 92, (78, 112, 131), (28, 133), (18, 113), (101, 145, 163), 36, 155, (13, 74), 154, 95, 124, (76, 93, 102, 150), (11, 87, 91, 110, 111, 141, 142, 149, 166).

Geography.—42, 129, 12, (71, 134), (8, 10), 43, (2, 135),* (16, 72, 127, 130) 6, 87, 51, 132, 1, (36, 128), (143, 157), (14, 159), (44, 83), 153, (5, 88), (52, 115, 131, 155), (89, 156), (144, 113), (54, 145), (7, 17, 117), 15, 93. (53, 85, 101, 158), (3, 4, 55, 70, 81, 114), (84 133, 154), (92, 164), (18, 66), (9, 111, 118), (69, 74, 90, 116), (112, 119, (123, 152).

Zoology.—36.*

Botany.—(34, 156, 157, 159), 30, 71, 27, 38, 39, 33, 158, (32, 92), 21, 127, 29 24, 2, 31, 25, 23,* (15, 22, 69, 76, 80), 5, 28, 64, (91, 132), 1, (60, 77), (41, 63), 79, 163, (75, 93), 74, (61, 62), 40, (128, 165), 63, 13, 95, 94, (90, 91, 135, 126).

Chemistry.—30 (5, 44)2*, 7, (1, 15), 13, 11.

DONATIONS

TO THE

LIBRARY OF McGILL COLLEGE,

FROM JUNE, 1887, TO MAY, 1888.

Graduates Society	The Gazetteer of the World, 9 vols.
Norwegian Government, Christiania	Norwegian North Atlantic Expedition, Zoology, Alcyonida.
Harvard University	Record of the 250th Anniversary, 1886.
Graduates Society	Sidgwick's History of Ethics.
Yale University	Transactions of the Observatory, 1887.
Zoological Society, London	Proceedings for 1886, Part 4.
	Transactions, vol. 4, Parts 4, 5 and 6.
U.S. Government	Census of the United States, vol. XII.
Secretary of State, Ottawa	Revised Statutes of Canada, 2 vols. 1886.
Edinburgh University	Calendar for 1887-8.
Trustees of British Museum	General Guide—Natural History.
	Guide to Galleries—Reptiles and Fishes.
	Catalogue of Fossil Mammalia, vol. IV.
	do Lizards, vol. III.
American Institute of Mining Engineers	Transactions, Vol. XV. 1887.
Norwegian Government, Christiania	The North Ocean, its depths, temperature, and circulation. 1887.
Secretary of State for the Colonies	Scientific Results of the Voyage of H. M. S. "Challenger," Zoology, Vol. XVII.
	do Botany, Vol. II.
Macmillan & Co., London	Practical Organic Chemistry, by J. B. Cohen.
	Wallenstein (Schiller), by H. B. Cotterill.
	Wilhelm Tell, do by G. E. Fasnacht.
Hon. Robert Mackay	Meerman's Juris Civilis, 7 vols.
	Cujacius Operum, 13 vols.
	Puffendorf, Le Droit de la Nature, 2 vols.
	Mornacius, Observationes in Pandectas, 4 vols.
	Haenel, Codices Theodosianus.
	Cumin, Manual of Civil Law.
	Ingram, Law of Compensation.
	Poste, Roman Law, by Gains.
Institute of Civil Engineers, London	Minutes of Proceedings, Vols. 89, 90 and 91, Charter and Index.
U. S. Bureau of Education	Art and Industry, Part I.
	Drawing in Public Schools.
Douglas Brymner, Ottawa	Report on Canadian Archives, 1886 and 1887, 2 vols.
McGill College Book Club	Adamson (Robt.), "Fichte."
	Aldrich, From Ponkagog to Pesthe.
	Arnold (M.), Irish Essays.
	Bacon, A Parisian Year.
	Bain, John Stuart Mill.
	Barlow, Ultimatum of Pessimism.
	Barbou, Victor Hugo.
	Beaconsfield, Wit and Wisdom of.
	Blauvelt, The Present Religious Crisis.
	Blunt Lady, The Bedouins of the Euphrates.
	Bouverie, Permanence and Evolution.
	Brassey Mrs , Sunshine in the East.
	Buckland Frank, Animal Life.
	Cockburn Lord, Life of Lord Jeffrey.
	Cook Dutton, Book of the Play.
	Conway M. D., Travels in South Kensington.
	Collins Rev. W. L., Butler.
	Cox S. S., Arctic Sunbeams.
	Church, Ella R., Money-making for Ladies.
	Chirol M. V., Twixt Greek and Turk.
	DuChaillu P. B., The Land of the Midnight Sun.
	Donnelly Ignatius, Atlantis.
	do Rognarok.
	Duke Edward, Beneath the Surface.

	Dippold G. T., The Epics of Germany.
	De Amicis E., Morocco.
	Ewald A. C., Stories from State Papers.
	Elliot Hon. A., The State and the Church.
	Edwards S., The Russians at Home.
	Ex. C. M. R., The Cape Mounted Rifles.
	Field Kate, Charles Albert Fechter.
	Fraser A. C., Berkeley.
	Freeman Edwd., Historical Lectures.
	Francis F., A Book on Angling.
	Green John R., The Making of England.
	Gilder W. H., Schwatka's Search.
	Gardiner and Spedding, English History.
	Gardiner and Mullinger, do
	Hamerton P. G., The Graphic Arts.
	Hardy Lady D., Through Cities and Prairie Lands.
	Hatton Joseph, The New Ceylon.
	Houghton Miss, In Spiritual Séance.
	Hughes, Thos., Daniel Macmillan.
	Huxley T. H., Science and Culture.
	James H. J., Nathaniel Hawthorne.
	Jebb R. C., Richard Bentley.
	Jennings H. J., Cardinal Newman.
	Kompert L., The Ghetto.
	Lanfrey P., Napoleon I., Vols. III. and IV.
	Lee Vernon, Belcaro Essays
	L'Estrange A. G., Mary Russell Mitford.
	Lodge Henry C., Alexander Hamilton.
	Luys J., The Brain and its Functions.
	Mahaffy, Old Greek Education.
	Mozley Rev. T., The Oxford Movement.
	Mivart St. George, Nature and Thought.
	McCarthy Justin, Epoch of Reform.
McGill College Book Club	Nadal E. S., Essays.
	O'Donoghue P., Ladies on Horseback.
	Phillips-Wolley, Sport in the Crimea.
	Payn James, Some Private Views.
	Quincy Josiah, Figures of the Past.
	Robinson P., Under the Sun.
	do The Poet's Birds.
	Rosetti C. G, A Pageant.
	Roosevelt Theodore, The War of 1812.
	Schway Y., The Burman.
	Smith Goldwin, Lectures and Essays.
	Stoddart R. H., Longfellow.
	Sikes Wirt, Rambles in Old South Wales.
	Sully James, Illusions.
	Stallo J. B., Modern Physics.
	Stevenson R. Louis, Books and Men.
	Saintsbury G., History of French Literature.
	Twain Mark. Life on the Mississippi.
	do Three in Norway.
	Underwood F. H., Longfellow.
	Vignoli T., Myth and Science.
	Von Holst H., John C. Calhoun.
	Ward, Adolphus W., Chaucer.
	Williams R. W., Eras of History.
	Wilde Oscar, Poems.
	Wilson, A. J., The National Budget.
	Wilberforce, Life of, 3 vols.
	Stearns H. P., Insanity.
	Morris W., Lectures on Art.
	Turner J. M. W., Life of.
	Dawson, Facts and Fancies.
	Saintsbury G., Dryden.
Total 99 Volumes and 38 numbers of periodicals	Reber Dr. F. Von, Historyof Ancient Art.
Hon. Robert Mackay	Gurwood's Wellington Despatches, 13 vols.
	Lamartine's Works, 14 vols.

Hon. Robert Mackay	Jerdan Wm., Autobiography, 4 vols. Dens. Theologia Moralis, 4 vols. Bryan Michael, Dictionary of Painters, 2 vols. Temple Sir John, The Irish Rebellion, 1641. King Wm., The Irish People under King James.
Secretary of State for India	The Trigonometrical Survey of India, Vol. IV.
Royal Colonial Institute	Proceedings, Vol. XXIII.
Provincial Secretary, Quebec	Jugements et Délibérations du Conseil Souverain, Vols. III. and IV.
Hon. Robert Mackay	Daryl, Dictionary of Painters. Flack, La Bonorum Possessio, sous les Empereurs Romains.
R. J. Wicksteed, Ottawa	Table of Statutes of the Dominion.
Dr. Fenwick	Meteorological Observations in MSS., taken by the late Canon Bethune.
Glasgow University	Calendar for 1887-88.
Sir J. W. Dawson	Annual Report U.S. Geological Survey, 1887.
Smithsonian Institution	Miscellaneous Collections, Vols. XXVIII., XXIX., XXX., XXXI. 4 vols.
Trustees of Peabody Institute, Baltimore	Catalogue of Library, Part 3.
Smithsonian Institution	Fourth Annual Report, Bureau of Ethnology, 1886. Annual Report of the Board of Regents.
Royal Society of London	Philosophical Transactions, Vol. CLXXVII.
Royal Dublin Society	Scientific Transactions, Vol. III., 3 parts. Scientific Proceedings, Vol. V., 5 parts.
Dr. S. Lockwood	Raising Diatoms in the Laboratory.
Walter H. Smith	Astronomy and Meteorology, Nos. 1 to 6.
Sir J. W. Dawson	Bulletins U.S. Geological Survey, Nos. 35, 36, 38 and 39.
Macmillan & Co., London	Bower and Vines, Botany, Part II.
J. P. Kimball, Director of the Mint, Washington, U.S	Production of Precious Metals, U. S. Report for 1886.
Thomas Workman	Victor Hugo's Works in French, 66 vols.
Macmillan & Co., London	Cæsar, Bond and Walpole. Ovid, do Lessons in the Greek Testament, Calvert. Kinematics and Dynamics, Macgregor. Greek Life and Thought, Mahaffy.
Sir J. W. Dawson	Bulletin U.S. Fish Commission, Vol. VI.
Trustees New York State Library, Albany	Library Reports, 67, 68 and 69. 3 vols. Regent's Reports, 98 and 99. 2 vols. Historical and Statistical Record, 1885. Museum Reports, 33-38 and 39. 3 vols. Sullivan's Expedition. 1 vol. New York and Pennsylvania Boundary, 1886. Natural History of New York, Vol V., Part 2, Vol. VI. 2 vols.
Canadian Society of Civil Engineers	Transactions, Vol. I., Part I., and Charter, Montreal, 1887.
Commissioners of the Croton Aqueduct	Croton Aqueduct, Vol. I.
Jeffrey H. Burland	Striker's Lepidoptera. Westwood's Introduction to Entymology, 2 vls. Papilio, Vols. 1. to IV. 4 vols. Canadian Sportsman and Naturalist. Practical Entomologist, 2 vols. American do Vols. I. to III. 3 vols. do Entomology, I. to V. 5 vols.
Under-Secretary of State, Ottawa	Epitomé des Documents Parlementaires relatifs à la Rebellion du Nord-Ouest.
U. S. Government, Washington	Report on Railways in relation to Forests and Forestry.
Hon. Robert Mackay	Statutes of Canada, 1886. Revised Criminal Law of Canada, 1887.
Secretary of State for the Colonies	Scientific Results of the Voyage of H. M. S. "Challenger," Zoology, Vols. XX., XXI. and XXII.

Sir J. W. Dawson	Final Results, New York State Survey, 1887.
Institute of Engineers and Ship Builders, Glasgow	Transactions for 1886-87, Vol. XXX.
Royal Institute of British Architects	Transactions, Vol. III., New Series.
R. J. Wicksteed, Ottawa	Sessional Papers, etc., 1887.
Royal Astronomical Society	Monthly Notices, Vol. XLVII.
Board of Commissioners Geological Survey of Pennsylvania	Annual Report for 1886.
Railroad Commissioners of the State of N. York	do do
do State of Massachusetts	do do
W. D. Lighthall	Thoughts, Moods and Ideals, 2 copies.
University of Toronto	Examination Papers, 1887.
Geological Survey of Canada	Catalogue of Canadian Plants, Part 3.
Henry Mott	Shakespeare Flora.
	Catalogue of the Shakespeare Memorial Library, Birmingham.
Sir J. W. Dawson	U S. Geological Survey, Mineral Resources of the United States, 1886.
Hon. Robert Mackay	Jugements et Délibérations du Conseil Souverain de la Nouvelle France, Vol. I., 1885; Vol. II., 1886.
	Report on Canadian Archives, 1882-3.4. in one vol. 1885-86.
Sir J. W. Dawson	Transactions of Seismological Society of Japan, Vol. XI.
	Annual Report of the Department of Mines, New South Wales, 1887.
	Geology of the Vegetable Creek Tin Mining Field, N.S.W. 1887.
H. E. the Governor General in Council	Inventaire Général des Richesses d'Art de la France, Vol. II.
Railroad Commissioners of the State of Ohio	Annual Report for 1884 and 1886. 2 vols.
Macmillan & Co., London	A Treatise on Algebra.
Dublin University	Calendar and Examination Papers, 1888
Hon. Robert Mackay	Acts of the Legislatures of the Provinces now comprised in the Dominion of Canada.
Rev. Canon Norman	Publications of the Musical Antiquarian Society, 1 vol. bound; 12 parts unbound.
Dublin University	Astronomical Observations, 1887.
Professor H. T. Bovey	Sanitary Engineering, by B. Latham.
Blackwood & Sons, Edinburgh	Scottish Metaphysics.
Sir J. W. Dawson	The Geological History of Plants, 2 copies.
Macmillan & Co., London	Electricity and Magnetism, Stewart & Gee.
	Latin Accidence and Exercises.
	Arrian, Selections.
	Xenophon, do
	History of the Achaean Legue, Polybius.
	Virgil, Æneid, Books VI. and IX.
Smithsonian Institution, Bureau of Ethnology	Bibliography of the Eskimo and Siouan Languages.
Comptroller of the Currency, Washington	Annual Report, 1887
F. S. Meighen	Life of the Duke of Wellington, by Stocqueler.
Henry Mott	Local Nomenclature of the Anglo-Saxons.
Geo. M. Dawson	Notes on the Kwakiool People of Vancouver Island.
University of Japan (Tokio)	Calendar for 1887-8.
Corporation of the City of Montreal	Reports for the year 1886.
Graduates' Society	The Laws of Insurance, by J. B. Porter.
	Traité Général de la Responsabilité, par M. A. Sourdat. 2 vols.
	Stateman's Year Book for 1888.
Railroad Commissioners of Massachusetts	19th Annual Report.
Rev. H. J. Petry, Lennoxville	Clavis Bibliorum. 2 vols.
Geological Survey of Canada	Maps of the Southern Interior of British Columbia.
Sir J. W. Dawson	History of the Scotch Presbyterian Church of Montreal.
	Proceedings of the American Association for the Advancement of Science, 1887.
	7th Annual Report of the State Mineralogist, California.

University of Aberdeen	Supplement to the Catalogue of the Library.
Peter Redpath	Oxford Historical Society's Publications, Vol. IX.
	Life of Sir W. E. Logan, by Dr. Harrington.
	Climate of Canada, by Dr. Hingston.
	Old to New Westminster, by Sandford Fleming.
	From Home to Home, by A. Staveley Hill.
	Lady's Life on a Farm in Manitoba.
	Speeches of Charles Dickens.
	do Earl Dufferin.
	Folk-Lore of Shakespeare, by T. F. T. Dyer.
	Cruces Shakespearianæ, by E. G. Kinnear.
	Notes upon some of Shakespeare's Plays.
	Shakespeare's Predecessors.
	The Mendelsohn Family, 2 vols.
	The Great Musicians, (3 vols.) Wagner, Schubert, Rossini.
	The Cup and the Falcon, by Tennyson.
	Becket, do
	Love Poems, by Louis Barnaval.
	Century of Roundels, by Swinburne.
	Lays and Legends of the North, by David Grant.
	Indian Idylls, by Edwin Arnold.
	George Eliot, G. W. Cooke.
	do (3 vols.) by J. W. Cross.
	do by Miss Blind.
	Mary Lamb, by Anne Gilchrist.
	Private Life of Marie Antoinette, 2 vols.
	Memoirs of Rufus Choate.
	Thomas Carlyle, by J. A. Froude. 2 vols.
	Arthur Penrhyn Stanley, by Grace A. Oliver.
	Life and Letters of Baroness Bunsen. 2 vols.
	Samuel Taylor Coleridge, by H. D. Traill.
	Walt Whitman, by Dr. R. M. Burke.
McGill College Book Club	Lives of Greek Statesmen, by Rev. Sir G. W. Cox.
	Life of Bishop Wilberforce, by A. R. Ashwell.
	" Luther, by J. Kostlin.
	" George Cruikshank, by Blanchard Jerrold.
	Lord Tennyson, by H. J. Jennings.
	Henry D. Thoreau, by F. B. Sanborn.
	John G. Whittier, by F. H. Underwood.
	Biographical Essays, by F. Max Muller.
	Twelve Americans, Howard Carroll.
	Life of Sydney Smith, by Stuart J. Reid.
	Autobiography of Henry Taylor, 2 vols.
	do Charles Bray.
	do James Nasmyth.
	do Anthony Trollope.
	More Leaves from a Journal of a Life in the Highlands.
	Diary of Henry Greville. 2 vols.
	Recollections of Edmund Yates. 2 vols.
	Memoirs of Lord Malmesbury. 2 vols.
	do Karoline Bauer. 2 vols.
	Salon of Madame Necker. 2 vols.
	Storm and Sunshine of a Soldier's Life. 2 vols.
	Leaves from the Life of a Special Correspondent. 2 vols.
	Records of a Later Life, by F. A. Kemble.
	Socrates, by W. W Goodwin.
	Troja, by Dr. Schliemann.
	Indian Myths, by Ellen R. Emerson.
	Landmarks of English Literature.
	Early English Literature, by E. W. Washburn.
	English Literature, 1509 to 1625.
	Flowers of the Sky, by R. A. Proctor.

McGill College Book Club.

Facts and Phases of Animal Life.
Nature near London, by Richard Jefferies.
Chronicles of Newgate, by Arthur Griffiths.
Journalistic London, by Joseph Hatton.
Nights at the Play, by Dutton Cook.
English Towns and Districts, by E. A. Freeman
Side Lights on English Society. 2 vols.
Public Life in England, by Philippe Daryl.
American Four-in-hand in Britain.
Social Life in the Reign of Queen Anne.
Rambles among the Hills, by L. J. Jennings.
Sandringham, Past and Present.
Organs of Speech, by Von Meyer.
Common Sense of the Exact Sciences.
Principal Pictures in the Louvre Gallery.
Beautiful Houses, by Mrs. Haweis.
The Home and its Surroundings.
Every Day Art. by Lewis F. Day.
Home Topics.
Women, Plumbers and Doctors.
Protection to Young Industries.
Rise of Constitutional Government in England.
Colonies and Dependencies.
Myths and Dreams, by Edward Clodd.
Concord Lectures on Philosophy.
History of Swearing, by Sharman.
Oliver Cromwell, by Paxton Hood.
Contemporary Socialism, by John Rae.
Old World Questions and New World Answers.
Modern Essays, by F. W. H. Myers.
Classical Essays, do
Expansion of England, by J. R. Seeley.
Progressive Morality, by Professor Fowler.
Recollections of my Youth, by Ernest Rénan.
Poems in Prose, by Ivan Tourguéneff.
Wisdom of Goethe, by J. S. Blackie.
Vico, by Robert Flint.
Hegel, by Edward Caird.
American Nervousness, by G. M. Beard.
Landscape, by Philip G. Hamerton.
Human Intercourse, do
In the Trades, the Tropics, &c., by Lady Brassey.
The Empire of the Hittites, by Dr. W. Wright.
Spanish Vistas, by G. P. Lathrop.
Temples and Elephants, by Carl Bock.
The Land of Misfortune.
Mount Seir, Sinai, etc., by Edward Hull.
The Never Never Land, by A. W. Stirling.
Boots and Saddles, by Mrs. E. B. Custer.
South Africa, by J. S. Little. 2 vols.
Random Rambles, by Louise C. Moulton.
Seven Spanish Cities, by E. E. Hale.
Life and Travel in India.
High Alps of New Zealand.
Norway in June, by Olivia M. Stone.
Among the Holy Hills, by H. N. Field.
A Little Tour in France.
Cities of Southern Italy.
Subject and Neighbour Life in Venice.
Gone to Texas, by Thomas Hughes.
The Still Hunter, by T. S. Van Dyke.
Three Visits to America, by Emily Faithfull.
Camps in the Rockies, by W. A. B. Grohman.
Paddle and Portage, by Thos. S. Steele.
Canoe and Camera do
North America, by Hayden & Selwyn.
Tonquin or France in the Far East.
Camping among Cannibals.

McGill College Book Club...	The Gardens of the Sun, by F. W. Burbidge. Confederate Soldier in Egypt, by W. W. Loring On the Desert, by H. M. Field. The River Congo, H. H. Johnston. Leading Men in Japan, by Chas. Lanman. Six Months in Ascension. History of the Coup d'Etat. 2 vols. The Transvaal War. Ancient Empires of the East. The Cities of Egypt, by Reginald S. Poole. War between Peru and Chili. Our Chancellor, by Moritz Basch. History of Prussia, 1134-1740. General Skobeleff, by E. A. Brayley Hodgetts. Underground Russia, by Stepniak. Military Italy, by Charles Martel. Military Life in Italy, by E. De Amicis. Virginia, by John Esten Cooke. The Story of Chinese Gordon. The Scourge of Christendom. Egypt and the Egyptian Question. The Wild Tribes of the Soudan. With Hicks Pasha in the Soudan. Khedives and Pashas. Greece under Othoman and Venetian Domination. History of Civilization in Scotland. 3 vols. Historical Monuments in France. Secret Service of the Confederate States. 2 vols. The Hessians in the Revolution. Conquest of England, by John R. Green. Italy, 1815 to 1878, by J. Webb Probyn. Italian and other Studies, by G. Huefffer. Marcus Aurelius Antoninus, by Paul B. Watson. Universal History. by Leopold Von Ranke. Prose Works of W. C. Bryant. 2 vols. High Life in France under the Republic. Fortunes made in Business. 2 vols. Teaching of the Twelve Apostles. Life and Works of Dr. C. J. B. Williams. The Capercaillie in Scotland, by J. A. Harvie Brown. The Foundation of Death, by A. Gustafson. George Fox, by A. C. Bickley. Wiclif and Hus, by Johann Loserth. World of Proverb and Parable, by Paxton Hood Edward Henry Palmer, by Walker Besant. Natural Law in the Spiritual World. Artistic Anatomy, by Mathias Duqal. The Christian Brothers, by Mrs. R. F. Wilson. Education in its relation to Manual Industry. Church and Chapel, by Rev. R. H. Hadden. Religious Thought in Britain during the 19th Century. German Universities for 50 Years. History of the four Georges. Letters of Rev. J. B. Mozley. Haunted Homes, by John H. Ingram. Echoes from Old Calcutta, by H. E. Busteed. Oats or Wild Oats, by J. M. Buckley. Selections from the Writings of Keble. Sinners and Saints.
Total...one volumes.	
H. Pedley.....	The World as Will and Idea. History of Newfoundland, by Rev. C. Pedley.
Superintendent of Education, Nova Scotia.....	Annual Report for 1887.
Robt. Bruce Armstrong.....	History of Liddesdale, Eskdale, &c.
Nova Scotia Institute of Natural Science.....	Proceedings, Vol. VII., Part 1. 1886-87.
R. J. Wicksteed, Ottawa.....	Treaties of Canada with the Indians of the N. West, by Hon. Alex. Morris.

Chas. Gibb, Abbotsford	Nomenclature of Russian Fruits.
Speaker of the Legislative Assembly, Quebec	Sessional Papers. Vol. XX., 1887, 2 parts.
British Association for the Advancement of Science	Report of 57th Meeting held at Manchester, 1887.
Superintendent of Education, New Brunswick	Report for 1887.
The Astronomer Royal, Greenwich	Greenwich Observations for 1885.
	Numerical Lunar Theory, by Sir G. B. Airy.
Dr. C. A. White, Washington	Palæontology of Brazil.
Chief of Engineers, U. S. Army War Department, Washington	Annual Report, 1886. 3 vols.
	do 1887. 4 vols.
H. Saxon Snell, London	Hospital Construction and Management.
	Charitable and Parochial Establishments.
Rev. H. G. Jesup, Hanover, N.H.	Edward Jesup and his Descendants.
Dr. B. J. Harrington	On the Sap of the Ash-leaved Maple.
The Queen's Printer, Ottawa	Acts of the Provinces and of Canada, not repealed by the Revised Code, 1887.
James Thin, Edinburgh	System of Christian Doctrine, by Dr. J. A. Dorner, 4 vols.
Macmillan & Co., London	ELEMENTARY CLASSICS :—
	Æschylus, Prometheus Vinctus.
	Euripides, Hecuba.
	Herodotus, Books 7 and 8.
	Homer, Iliad, Books 1 and 18.
	do Odyssey, Book 1.
	Lucian, Selections.
	Plato, Euthyphro and Menexemus.
	Thucydides, Books 1 and 4.
	Xenophon, Anabasis.
	do Cyropœdia.
	Greek Elegiac Poets.
	Cæsar, Invasion of Britain.
	do Gallic War.
	do Books 1, 4, 5 and 6.
	Cicero, Stories from Roman History.
	do Select Letters.
	do De Amicitia.
	do De Senectute.
	Cornelius Nepos, Selections.
	Eutropius, Historia Romana.
	Horace, Epodes and Ars Poetica.
	do Satires and Epistles.
	do Odes, 1, 2, 3 and 4.
	Livy, Book I.
	do Hannibalian War.
	do Siege of Syracuse.
	Ovid, Selections.
	Phœdrus, Select Fables.
	Terence, Andria.
	Virgil, Selections.
	do Georgic II.
	do Æneid 1 and 5.
	Short Exercises in Latin Prose Composition.
	do do part 2.
	First Steps to Greek Prose Composition.
	Second Steps do do
	The Germania of Tacitus.
	Shorter Latin Course.
	Progressive French Course. 3 parts.
	do do Reader. 2 parts.
	Progressive German Course. 2 parts.
	do do Reader.
	FEENCH AND GERMAN READING BOOKS :—
	Contes des Fées, par G. E. Fasnacht.
	Fables de LaFontaine, L. M. Moriarty.
	La Jeune Sibérienne &c., Stéphane Barlet.

Die Karavane,	Wilhelm Hauff.
Le Cid,	G. E. Fasnacht.
Le Médecin malgré lui	do
Le Misanthrope,	do
Les Femmes Savantes,	do
Charles XII.,	do
Le Bourgeois Gentilhomme, (Molière).	
L'Avare, (Molière).	
La Mare au Diable (George Sand).	
Les Demoiselles de Saint-Cyr (Alex. Dumas).	
Mademoiselle de la Seiglière (Jules Sandeau).	
Britannicus (Racine).	
French Readings from Roman History.	
Goethe, Gotz von Berlichingen.	
do Faust, part I.	
Heine, Prose Selections.	
Schiller, Die Jungfrau von Orleans.	
do Selections from Lyrical Poems.	
do Maria Stuart,	
Uhland, Ballads and Romances.	

SCHOOL CLASS BOOKS: —

Macmillan & Co., London.

Æschylus, The Persœ.	
Andocides de Mysteriis.	
Demosthenes, De Corona.	
do First Philippic.	
do Oration against Leptines.	
Euripides, Medea.	
do Hippolytus.	
do Iphigenia in Tauris.	
Homer, Story of Achilles.	
do Odyssey, Book IV.	
do do Books XXI., XXIV.	
Lysias, Orationes XVI.	
Plutarch, Life of Themistokles.	
Thucydides, The Sicilian Expedition.	
do Book IV,	
Xenophon, Hellenics I.-II.	
do Cyropœdia, VII.-VIII.	
do The Hieron.	
do Memorabilia Socratis.	
do Œconomicus.	
Catullus, Select Poems.	
Cicero, Second Philippic.	
do Pro Publio Sestio.	
do Orations against Catiline.	
do Pro Lege Manilia.	
do Pro Roscio Amerino.	
Horace, Odes.	
do Epistles.	
do Satires.	
do Odes I., II., III., IV.	
Juvenal, Satires.	
do do X., XI.	
do do XII., XVI.	
Livy, Books II., III.	
do do XXI., XXII.	
do do XXIII., XXIV.	
do Last Two Kings of Macedon.	
Lucretius, DeRerum Natura, I., III.	
Martial, Selected Epigrams.	
Ovid, Heroidum Epistolæ, XIII.	
do Fasti.	
Plautus, Miles Gloriosus.	
Pliny, Letters, Book III.	
Propertius, Select Elegies.	
Sallust, Catilina.	

Macmillan & Co., London	Sallust, Jugurtha.
	do Catilina et Jugurtha.
	do Catilinarian Conspiracy.
	Tacitus, Annals, Book VI.
	do Agricola.
	do Agricola and Germania.
	Terence, Phormio.
	do Hauton Timorumenos.
	do do with Translation.
	Virgil, Æneid, II., III.
	Cæsar, Gallic War, Latin Prose Exercises.
	do Latin Prose.
	Latin Course, 1st Year.
	Geology, Class Book, by A. Geikie.
	Electricity and Magnetism, Silvanus Thompson.
	Mechanics and Machinery, by A. B. W. Kennedy.
	Atlas of Practical Elementary Biology.
	Elements of Thermal Chemistry.
	Constructive Geometry of Plane Curves.
	Units and Physical Constants, by J. D. Everett.
	Micro-Organisms and Disease, by Dr. E Klein.
	Symbolic Logic, by John Venn.
	Formal Logic, by John Neville Keynes.
	Deductive Logic, Text Book, by P. K. Ray.
	Ethics, Outlines of the History of, by H. Sidgwick, Mathematics.
	Weekly Problem Papers, by John J. Milne.
	Chemical Arithmetic, by Sydney Lupton.
	Algebraical Exercises, by Hall and Knight.
	Trigonometry for Beginners, by J. B. Lock.
	do Elementary, do
	Arithmetic for Schools, do
	Algebra, Elementary, by Charles Smith.
	Physical Arithmetic, by A. Macfarlane.
	Spherical Trigonometry, parts 1 and 2.
	Elementary Statics, by John Greave.
	do Practical Physics, by Stewart and Gee
	Differential Calculus, by A. G. Greenhill.
	do and Integral Calculus, by J. Edwards
Total, 165 volumes.	
Melbourne University	Calendar for 1887.
University of London	" for 1888-89.
Edmond Lareau	Histoire Abrégée de la Littérature.
do	Histoire du Droit Canadien, 2 copies.
Macmillan & Co., London	Elementary Algebra for Schools.
	Higher Arithmetic and Elementary Mensuration.
Henry Mott	Kinglake's Invasion of the Crimea, Vol. 4.
W. F. Ritchie	M. S. Book, written on Birch Bark (Journal written in the woods in 1803).
Sir J. W. Dawson	Proceedings of the American Association for the Advancement of Science, 1887.
	7th Annual Report of the State Mineralogist, California.
George Johnson, Ottawa	Johnson's Graphic Statistics.
John Hunter Duvar	Roberval, a Drama and other Poems.
William Drysdale	Jacobi Augusti Thuani Historiarum Frankfort, 1621. 5 vols.
Trustees of the British Museum	Catalogue of the Fossil Mammalia in the British Museum, part V.
do	Catalogue of the Birds, Vol. XII.
Hon. Sir Charles Tupper, Ottawa	The Rothamsted Experiments on the growth of Wheat, Barley, etc., by Wm. Fream.
do	A number of Pamphlets on Dairy Farming, &c
Rev. Saml., Haughton, Trin. College, Dublin	Monograph of the Earthquakes of Ischia, 1885.
Geological Survey of Pennsylvania	Annual Report for 1887, part 3, and accompanying Atlas.
	Western Middle States, part 2.
	Bucks and Montgomery Atlas, C. 7.

DONATIONS TO THE MUSEUM.

TO JANUARY, 1888.

E. H. Hamilton, B.A.Sc., Montreal	Specimen of *Cetraria* from the Selkirk Mountains, B.C.
The Geological Survey, Ottawa, through Professor Macoun	Valuable collections of Canadian and European Plants.
Dr. T. Wesley Mills, Montreal	Marine Invertebrates from the Bahamas.
Dr. B. J. Harrington, Montreal	Specimen of *Gorgonia* from Florida.
Mr. W. S. Patterson	Specimens of sands from Charleston, N.C.
Mr. E. Wintle, Montreal	Specimen of Garter Snake.
Mrs. W. B. Dawson, Montreal	Specimens of Corals from Barbados.
Mr. W. F. Ferrier, B.A.Sc., Montreal	Trilobites from the Potsdam Sandstone of Au Sable, N.Y. Specimen of *Gryphea vesicularis* from the Cretaceous of New Jersey. Specimens of Star-fish, Sea-fan and Coral. Collection of European Woods.
The Geological Survey, Ottawa	Duplicates of Plants from the Laramie Series.
Mr. Wolfred Nelson	Photographs of Pottery, etc., from Chiriqui. Skeleton of Leaf
Rev. Dr. Patterson, New Glasgow, N.S	Specimens of Micmac Pottery from Nova Scotia, and Pottery from New Hebrides.
Mr. W. A. Oswald, Belle Rivière, P.Q.	Specimen of natural Graft and Wasp's Nest.
Lieut.-Col. Grant, Hamilton, Ont	Collections of Niagara Fossils.
Dr. J. W. Spencer, University of Missouri	Specimens of Upper Carboniferous Fossils.
Dr. Rankine Dawson	Skull from Hochelaga.
Mr. W. C. McDonald, Montreal	77 cases of Insects, being the collection of the late J. G. Bowles, purchased for the Museum, with new glass cases for the same.
Mr. A. J. Hubbard, Montreal	4 Arrow-heads from Ancaster, Ont.
Rev. M. S. Oxley	Specimen of Buzzard.
Mr. W. Monk, Montreal	Collection of Birds' Eggs.
Mr. E. J. Maxwell, Montreal	Collection of Foreign Woods.
Prof. H. T. Bovey, Montreal	Specimen of Stellar Gypsum from Nova Scotia.
Mr. Charles Gibb, B.A., Abbottsford, P.Q.	Large Star-fish from Santa Rosa Island off the coast of Southern California. Collection of Natural History specimens from coast near Montery, California. Specimens of Geyserite from the Yellowstone Park.
Mr. W. W. Head, Chicago	Specimen of Fossil Sponge from Lower Silurian.
Rev. E. Yamenaka, Japan	Ancient Pottery from Japan.
Dr. G. M. Dawson, Ottawa	Specimens of Gold-bearing Rock and Chrysocolla from Alaska.
Dr. D. Meagher	Indian Arrow-head of Basalt from the Thousand Islands.
Mr. G. F. Matthew, F.R.S.C., St. John, N.B.	Cast of *Paradoxides Regina* of the St. John group.
Mr. R. J. Fowler, Montreal	Septaria concretion from Phillipsburg.
Miss Helen Gairdner, Montreal	Esquimaux Dipper, Spoon, Snow-spectacles and Copper Knife.
H. M. Ami, M.A., F.G.S., Ottawa	Specimen of Mountain Cork from the Emerald Mine, Buckingham Township, P.Q.

McGill Normal School,

1888–89.

Government of the School.

Under the Regulations for the establishment of Normal Schools in the Province of Quebec, the Superintendent of Public Instruction is empowered to associate with himself for the direction of one of these Schools the Corporation of McGill University, Montreal. In accordance with this arrangement the Provincial Protestant Normal School is affiliated with the McGill University, and the following members of the Corporation of the University constitute the Committee of the Normal School for the Session of 1888–9.

NORMAL SCHOOL COMMITTEE

Sir Wm. Dawson, LL.D., F.R.S., Vice-Chancellor of the University, *Chairman*.

Mr. Samuel Finley.
George Hague, Esq, } Governors of McGill College.

Rev. George Cornish, LL.D.
J. R. Dougall, M.A. } Fellows of McGill University.

J. W. Brakenridge, B.C.L., *Acting Secretary*.

OFFICERS OF INSTRUCTION.

McGILL NORMAL SCHOOL.

SAMPSON PAUL ROBINS, M.A., LL.D., *Principal and Ordinary Professor of Mathematics and Lecturer on Art of Teaching and Natural Science.*

GEORGE W. PARMELEE, ESQ., *Ordinary Professor of English Language and Literature, and Instructor in Classics.*

MADAME SOPHIE CORNU, *Professor of French.*

MR. R. J. FOWLER, *Instructor in Music.*

MR. JOHN ANDREW, *Instructor in Elocution.*

MISS GREEN, *Instructor in Drawing.*

MISS ROBINS, *Assistant to the Principal.*

MODEL SCHOOLS OF THE McGILL NORMAL SCHOOL.

MR. THOS. B. SMILEY, *Acting Head Master of Boys' School.*

MISS JANE A. SWALLOW, *Head Mistress of Girls' School.*

MISS LUCY H. DERRICK, *Head Mistress of Primary School.*

ANNOUNCEMENT FOR THE SESSION 1888-9.

This Institution is intended to give a thorough training to teachers, especially for the Protestant population of the Province of Quebec. This end is attained by instruction and training in the Normal School itself, and by practice in the Model Schools; and the arrangements are of such a character as to afford the greatest possible facilities to Students from all parts of the Province.

The thirty-third Session of this school will commence on the first of September, 1888, and close on the thirty-first of May, 1889. The complete course of study extends over four years, and the Students are graded as follows:—

1.—*Elementary School Class.*—Studying for the Elementary School Diploma.

2.—*Model School Class.*—Studying for the Model School Diploma.

3.—*Academy Class.*—Studying for the Academy Diploma.

1. Conditions of Admission and of Obtaining Diplomas.

Candidates for admission into the Elementary School Class will be required to pass an examination in Reading, Writing, the elements of Grammar, Arithmetic and Geography; and to produce the certificate and sign the application referred to in Articles 1 and 2 of the Regulations. Admission into each of the higher classes requires a knowledge of the subjects of the previous one.

Those admitted to the Elementary School Class at the beginning of the Session must be able to parse correctly a simple English sentence; must know the continents, greater islands, peninsulas, and mountains, the oceans, seas, larger gulfs, bays, straits, lakes and rivers, and the chief political divisions and most important cities of the world, must write neatly a dictation from any school reader, with no more than five per cent. of mistakes in spelling, in the use of capitals, and

in the division of words into syllables ; and must be able to work correctly examples in the simple rules of Arithmetic and in fractions.

Associates in Arts of the Universities, of the requisite age, may be admitted into the Elementary School Class, and, provided that they have passed in Geometry, Algebra and French, into the Model School Class, without examination.

Each Student must produce a certificate of good moral character from the clergyman or minister of religion under whose charge he has last been, and also testimony that he has attained the age of sixteen years. He will also be required to sign a pledge to teach for three years in some public school in the Province of Quebec.

Candidates for admission will be furnished with forms of application on communicating with the Principal of the School.

There will be a Semi-sessional Examination at Christmas, which all Students are required to pass in order to continue in the Classes.

At the close of the first year of study Students may apply for examination for diplomas, giving the right to teach in Elementary Schools ; and after two years' study, or if found qualified at the close of the first year, they will, on examination, be entitled to diplomas as teachers of Model Schools.

Students having passed with distinction the examination for the Model School Diploma may go on to the Academy Class after matriculating in McGill or Bishop's College University, on terms stated page 223.

Students are expected to give their whole time and attention to the work of the School, and are not permitted to engage in any other course of study or business during the sessions of the School.

2. Privileges of Students.

On complying with the above conditions, all Students will be recognized as *Teachers-in-training*, and as such will be entitled to free tuition, and to bursaries in aid of their board and of the cost of text books, not exceeding $36.00 per annum in the two first Classes, nor $30.00 in the Academy Class, should they be successful in obtaining the diploma at the final examination. A portion of this

allowance will be advanced to such Students as are not resident in Montreal, on their passing the semi-sessional examination.

Under the regulations subjoined, and with the view of extending the benefits of the School to all parts of the country, those who reside at a distance of more than ninety miles from the city of Montreal, will also be entitled to a small allowance for travelling expenses, proportionate to the distance.

Students resident in Montreal may share in the Bursary Fund, on producing certificates from their ministers or clergymen, that such aid is absolutely necessary to their continuing in attendance at the School.

In addition to religious instruction of a general Protestant character by the Professors, arrangements will be made for special religious instruction by ministers representing the several denominations with which the Students may be connected.

No boarding-house is attached to the institution, but every care will be taken to ensure the comfort and good conduct of the Students in private boarding-houses, approved by the Principal. Board can be obtained at from $12 to $16 per month.

The J. C. Wilson Prize of $40 and a Book, contributed by him as a former Student of the School, will be offered for competition to the candidates for the Elementary Diploma, and will be given for the highest aggregate number of marks.

The Prince of Wales Medal and *Prize* will be given to the student taking the highest place in the Model School Class, provided that such student shall attain to the standard fixed by the Regulation of the Council of Public Instruction for this Medal.

All the preceding regulations and privileges apply to female as well as to male students.

3. Course of Study.

N.B.—The subjoined Course of Study has been designed, and all instruction in it is given, with express reference to the work of teaching.

In addition to the work of the School carried on by its regular professors, as detailed in the subjoined course of study, arrangements

have been made by which lectures on School Law will be delivered by Rev. E. I. Rexford, B.A., Secretary of the Department of Public Instruction, on Botany by Professor Penhallow, B.Sc., on Physiology and Hygiene by Thomas Reed, Esq., M.D., and on Chemistry by Mr. Nevil Evans, B.A. Sc.

1. ELEMENTARY SCHOOL CLASS, STUDYING FOR THE ELEMENTARY SCHOOL DIPLOMA.

With the view of accommodating teachers actually in charge of schools at the commencement of the Session, and whose previous education may enable them to enter at a more advanced period, the course of study in this class is divided into terms, as follows:

FIRST TERM, from September 1st to December 3rd.

(*Entrance examination as stated above.*)

English.—The structure of sentences. Orthography and orthoepy. Penmanship. The study of Milton's L'Allegro.

Geography.—General view of continents and oceans. Map of North America.

History.—Outline of general and sacred history.

Arithmetic.—Simple and compound rules.

Algebra.—The elementary rules.

Geometry.—Elementary Notions.

French.—Darey's Principes de Grammaire Française to page 50, with verbs of first conjugation.

French History.—Histoire de France to page 40.

French Geography.—Eléments de Géographie Moderne, Amérique.

Botany.—Lectures.

Chemistry.—Lectures.

Physiology and Hygiene.—Lectures.

Reading and Elocution.

Drawing.—Elements, simple outlines and map drawing.

Music.—Vocal music with part songs. Junior Certificate of Tonic Sol-Fa College.

Art of Teaching.—Hughes' How to Secure Attention.

SECOND TERM, January 6th to end of Session.

(*No pupils will be received after the commencement of this term. Those who enter must pass the Examination of the class in the work detailed above.*)

English.—Structure of words and sentences. Etymology, derivation and syntax. Study of Milton's Il Penseroso and of Macaulay's Essay on Milton.

Geography.—Contour, elevations, river systems, political divisions and chief cities of South America and of the Old World.

History.—England.

Arithmetic.—Fractions and proportion. Properties of numbers. Mensuration.

Algebra.—Simple equations of one unknown quantity with problems.

Geometry.—First book of Euclid with deductions.

Art of Teaching.—Lectures on school architecture, organization and discipline, on school law and on methods of teaching particular subjects.

French.—Principes de Grammaire Française, page 100, with verbs regular and irregular.

French History.—Histoire de France to page 73.

French Geography.—Europe.

Botany.—Lectures.

Reading and Elocution.

Drawing.—Freehand drawing from the solid, and elements of perspective.

Music.—Elements of vocal music and part songs. Elementary Certificate of Tonic Sol-Fa College.

Practice in Teaching in the McGill Model Schools, as directed by the Principal.

Religious Instruction will be given throughout the Session.

In addition to the text-books named above, each student of the Elementary School Class must be provided with an English Grammar, an English History, an Atlas of recent date, an Arithmetic, Todhunter's Algebra, and a Euclid.

2. MODEL SCHOOL CLASS, STUDYING FOR THE MODEL SCHOOL DIPLOMA.

Students entering the school in this second year must have passed a satisfactory examination in the subjects of the Elementary School Class. The Class will pursue its studies throughout the Session, without division into terms.

English.—Principles of grammar and composition. Style. History of the English Language. Study of Shakespeare's Tempest, Poe's Sleeper, and Tennyson's Lotos Eaters.

Geography.—Mathematical and physical. Use of the globes.

History.—Greece, Canada.

Art of Teaching.—Lectures on school architecture, organization and discipline, on school law, and on methods of teaching particular subjects.

Arithmetic.—Commercial arithmetic and bookkeeping. Logarithms.

Algebra.—Equations of more than one unknown quantity, and quadratics.

Geometry.—Second, third and fourth books of Euclid, with application to mensuration.

Object Lessons.

Latin.—Elements, as in Bryce's 1st Latin Reader.

Greek.—Optional to students sufficiently advanced.

French.—Translation from French into English, and from English into French, Worman's French Grammar, Lectures Françaises, Dominion Phrase Book, Canadian History, L'Histoire du Canada par Miles, French Geography.

Botany.—Lectures.

Physiology and Hygiene.—Lectures.

Chemistry.—Lectures.

Agricultural Science.—Principles, especially chemical and botanical, and application to Canadian agriculture.

Elocution.

Drawing.—Elements of perspective, drawing from the cast and map drawing.

Music.—Instrumental music, part songs, and rudiments of harmony. Intermediate Certificate of Tonic Sol-Fa College.

Practice in Teaching.—In the McGill Model Schools, as directed by the Principal.

Religious Instruction throughout the Session.

Such students as may, from their conspicuous ability and preparation, be selected to enter the Academy Class of the Normal School, will, in addition to the work given above, read Xenophon Anabasis Book I., and Virgil Æneid Book I., with special attention to Greek and Latin Grammar.

In addition to text-books named above, each student of the Model School Class must be provided with an English Grammar, a History of Canada, a History of Greece, an Arithmetic, a Todhunter's Algebra, a Euclid, and Dawson's Scientific Agriculture.

3. ACADEMY CLASS, STUDYING FOR THE ACADEMY DIPLOMA

Will follow for two years the course of McGill University and its affiliated colleges, or that of Bishop's College, Lennoxville, being enrolled on the books of the Normal School, and, if residents of the country, receiving a bursary from the Normal School not exceeding $30 per annum, and such tutorial assistance as may be deemed necessary. Such students must take in their courses such options only as are approved by the Principal of the Normal School. See page 223.

The course for the current year in McGill College is :—

Greek.—Odyssey, Book XVII. XX. (Selections).

Latin.—Cicero. Select letters. Virgil Book VI.

English Language and Literature.—Analysis and Composition. Milton's Comus. Lectures on English Literature.

French.—Darey, Principes de Grammaire française. La Fontaine, Les Fables, livres I. and II. Molière, Le Bourgeois gentilhomme. Dictation and Colloquial exercises.

Mathematics.—Arithmetic. Todhunter's Euclid, Books 1, 2, 3, 4, definitions of 5, and 6, except propositions 27, 28, 29. Colenzo's Algebra to end of quadratics, Galbraith and Houghton's Plane Trigonometry.

Chemistry.—Lectures illustrated by experiment on chemical theories and laws, and on the more important elements and compounds. Nichol's "Abridgment of Eliot and Storer's Manual of Chemistry."

The course in Bishop's College for the current year is :—

Greek.—Euripides Cyclops ; Arrian ; Anabasis, Book III.

Latin.—Virgil, Georgics 1 and 2 ; Cicero.

English.—Rhetoric and Grammatical Analysis, with a course of Lectures on English Literature.

History.—Greek and Roman.

French.—Translation, Grammar and Composition.

Mathematics.—Euclid, Books 1, 2, 3, 4 and 6. Algebra to Progressions Arithmetic.

Physics.—Balfour Stewart's Elementary.

BY-LAWS McGILL NORMAL SCHOOL.

(*Special Regulations for the admission of Teachers-in-Training.*)

Article First.—Any person desirous of being admitted as a Teacher-in-training must apply to the Principal of the Normal School, who, on his producing an extract from the Register of Baptisms, or other evidence, showing that he is full sixteen years of age, with the certificate of character and conduct required by the 6th article of the General Rules and Regulations, approved by His Excellency the Governor-General in Council, on the 22nd December, 1856, shall examine the candidate.

If, upon his examination, it is found that the candidate can read and write sufficiently well, knows the Rudiments of Grammar in his mother tongue, Arith-

metic as far as the rule of three inclusively, and has some knowledge of Geography, the Principal shall grant him a certificate.

Article Second.—The candidate, having thus obtained the certificate of the Principal, shall then (in the presence of two witnesses, who, with the Principal, shall countersign the same) sign an application in writing for admission, containing the declaration required by the 23rd general regulation. This shall be forwarded to the Superintendent of Education, together with all the certificates and other documents required, and, if the whole be found correct, the Superintendent shall cause the name of the candidate to be inscribed in the Register, and notice thereof shall be given to the Principal.

Article Third.—The Teachers-in-training shall state the place of their residence; and those who cannot reside with their parents will be permitted to live in boarding-houses, but in such only as shall be specially approved of. No boarding-houses having permission to board male Teachers-in-training will be permitted to receive female Teachers-in-training as boarders, and *vice-versa*.

Article Fourth.—Every Teacher-in-training, on passing the examinations, will be allowed a sum, not exceeding $36, to assist in paying his board.

Article Fifth.—Every Teacher-in-training residing at a distance of more than ninety miles from the City of Montreal, shall be entitled to receive an allowance for travelling expenses proportionate to the distance, but not to exceed ten dollars *per annum*.

Article Sixth.—The total amount of allowances paid to Teachers-in-training under the foregoing articles shall not exceed $1,333.33 currency, yearly—that being the sum granted for that object; and when the whole of this amount is appropriated, such Teachers-in-training as may apply for admission shall not be entitled to any portion thereof until vacancies shall occur.

(*Special Regulations for Government and Discipline.*)

Article First.—Teachers-in-training guilty of drunkenness, of frequenting taverns, of entering disorderly houses or gambling houses, or keeping company with disorderly persons, or committing any act of immorality or insubordination, shall be expelled.

Article Second.—There shall be no intercourse between the male and female Teachers-in-training while in School, or when going to, or returning from it. Teachers of one sex are strictly prohibited from visiting those of the other.

Article Third.—They are on no account to be absent from their lodgings after half-past nine o'clock in the evening.

Article Fourth.—They will be allowed to attend such lectures and public meetings only as may be considered by the Principal conducive to their moral and mental improvement.

Article Fifth.—Proprietors of boarding-houses authorized by the Principal shall report to him any infraction of the rules with which they may have become acquainted.

Article Sixth.—The Professors shall have the power of excluding from the lectures for a time any student who may be inattentive to his studies, or guilty of any minor infraction of the regulations.

Article Seventh.—Teachers-in-training will be required to state with what religious denomination they are connected ; and a list of the Students connected with each denomination shall be furnished to one of the Ministers of such denomination resident in Montreal, with a request that he will meet weekly with that portion of the Teachers-in-training, or otherwise provide for their religious instruction. Every Thursday after four o'clock will be assigned for this purpose.

Article Eighth.—In addition to punctual attendance at weekly religious instruction, each Student will be required to attend public worship at his own church at least every Sunday.

Regulations concerning the Academy Class of the McGill Normal School, adopted by the Protestant Committee of the Council of Public Instruction, and approved by the Lieutenant-Governor in Council, May 9th, 1888.

1st. The Normal School shall bring up selected students at the end of the Model School year to the examinations for the entrance into the first year of the Faculties of Arts of the Universities. They may be examined either at the examinations for the Associate in Arts in June, or at those for the matriculation in autumn, and shall take the full course of study in the first and second years.

2nd. Such students shall be enrolled in the Normal School as students of the Academy Class, and shall be under the usual pledge to teach for three years. They shall engage in the practice of teaching at such times and in such schools as may be from time to time arranged by the Principal in consistence with their college work, and shall be under the Principal and the regulations of the Normal School.

3rd. On report of the Colleges which such students may be attending, that they have passed creditably in the Christmas and Sessional examinations respectively, they shall be entitled to bursaries, not exceeding thirty dollars per Session, in aid of fees and board. Such bursaries may be paid by the Normal School Committee out of any fund available for the purpose.

4th. On passing the intermediate or equivalent examination, such students will be entitled to receive Academy diplomas, in accordance with the regulations of the Protestant Committee of the Council of Public Instruction for such diplomas.

5. Such Students may, with the advice of the Principal, attend classes at the McGill or its affiliated Colleges or at Bishop's College, and the Normal School Committee shall make such arrangements as may be possible for free tuition at such Colleges.

6. It shall be competent to the Principal of the Normal School to provide any tutorial assistance that may in his judgment be necessary for the Academy Students or any of them. Also it shall be his duty in the case of optional studies to select for the Students those required for the curriculum of the Normal School.

7. It shall be competent to students who have taken the Academy diplomas as above to continue for two years longer at the University, or to return thereto after teaching for a time, in order to take the degree of Bachelor of Arts, but they shall be held bound to fulfil their engagements to teach, and they shall not be entitled to bursaries.

N.B.—1. Students who intend to enter the Universities on these terms are required :

1. To make application to the Principal of the Normal School at the beginning of each year for enrolment on the books of the Normal School.

2. To present a certificate of enrolment from the Principal of the Normal School to the Dean of the Faculty of Arts, and fill up a form of application for admission.

3. To pass the required examinations.

4. To procure tickets from the Registrar and sign the Matriculation register.

5. To present their tickets to the Dean.

6. To provide themselves with the Academic dress.

7. Having entered the classes of the College, to report themselves to the Principal of the Normal School from time to time as he may require.

REGULATIONS FOR ACADEMY DIPLOMAS.

Adopted by the Protestant Committee, and approved by Lieutenant-Governor in Council, May 9th, 1888.

REG. 49.—Each Academy Diploma, granted hereafter, shall clearly indicate the class of diploma and the particular provision of these regulations, under which the candidate is entitled to the diploma.

REG. 50.—Academy Diplomas granted by boards of examiners shall be second class academy diplomas.

REG. 51.—Graduates in Arts from any British or Canadian University, who

have passed in Latin and Greek in the Degree Examinations, or who have taken at least second class standing in Latin and Greek at their intermediate examination, shall be entitled to receive first class academy diplomas, provided that they have also taken either (a) the regular course in the Art of Teaching at the McGill Normal School or other public training institution, outside the Province, approved by the Protestant Committee, or (b) a first class standing in the special professional examination, provided for such graduates by the McGill Normal School. Such aforesaid graduates as take only second class standing in the special professional examination of the foregoing sub-section (b) shall be entitled to second class academy diplomas only.

REG. 52.—Teachers taking Academy Diplomas in course from the McGill Normal School, who take at least second class standing in Latin and Greek, in their intermediate examination, shall be entitled to receive first class academy diplomas, otherwise their diplomas shall be second class.

REG. 53. Teachers who hold (a) academy diplomas granted before the first July, 1886, or (b) second class academy diplomas granted under these regulations, and who produce satisfactory proof to the Protestant Committee that they have taught successfully for at least ten years, shall, when recommended by the committee, be entitled to receive first class academy diplomas.

REG. 54.—Any candidate who presents to the Principal of the McGill Normal School (a) the requisite certificate of age and of good moral character, according to the form prescribed by regulation 48, and (b) satisfactory certificates that he has complied with either of the foregoing regulations, 51, 52, or 53, shall be recommended by him to the Superintendent of Public Instruction, for an Academy Diploma of the class to which he is entitled under these regulations.

FORM OF CERTIFICATE OF MORAL CHARACTER REQUIRED BY REGULATION 54.

"This is to certify that we, the undersigned, have personally known and had opportunity of observing..... .....for the ..... last past; that during all such time *his* life and conduct have been without reproach; and we affirm that we believe *him* to be an upright, conscientious, and strictly sober *man*."

"*This certificate must be signed by the Minister of the congregation to which the candidate belongs, and by two School Commissioners or Trustees, for candidates under Regulations* 51 *and* 52, *and also by the Inspector of his district for a candidate under Regulation* 53."

PROVISIONS FOR SPECIAL PROFESSIONAL EXAMINATION, UNDER REGULATION 51 FOR ACADEMY DIPLOMAS.

REG. 55. 1. The examination of Bachelors of Arts and members of graduating classes who are candidates for Academy diplomas shall be held in the McGill Normal School, on and after the 15th of May each year, and the results shall be declared at the close of the Normal School Session in May.

2. The Principal of the School is authorized to send examination papers based upon the syllabus given in regulation 56, to the University of Bishop's College, for the use of students in their graduating class, and such students shall receive their diplomas on their graduating.

3. *The period for study in the Model School for such candidates shall be fixed from time to time by the Principal, and shall extend over at least four weeks.

56. *Syllabus of Examination in the Art of Teaching prescribed by Regulation 55 for Academy diplomas.*

1. Acquaintance with the School Laws of the Province and with the regulations made by the Protestant Committee of the Council of Public Instruction, in so far as these refer to the duties of Teachers.

2. A knowledge of the aim and possible attainment of school life, of the annual progress to be expected, of the best classification, the best arrangement of school duties tending to this end, and of the mode of recording all facts respecting the attendance and progress of pupils that may be necessary.

3. The subject of discipline, and in relation to it, the teacher, the parents, the pupils, rewards, punishments, and the formation of the habit of instinctive obedience.

4. The best methods of imparting knowledge, how to present it to the understanding, how to fix it in the memory, how rightly to govern a class in receiving knowledge, and how to conduct a successful class recitation, together with the methods of instruction in each important branch of school work.

5. Methods of using books aright, and of investigating truth, by weighing evidence and by using the senses as instruments of research.

6. The physical, mental and moral constitution of the child, and the demands that society will hereafter make upon him.

To prepare for such an examination the candidate should carefully weigh his own experiences as a learner, should closely examine the methods in vogue in a good school, and should add to the impressions received from his general reading the results of studying Baldwin's Art of School Management and Gladman's School Methods, a thorough knowledge of which will be required.

---

*Bachelors of Arts will observe that the Principal of the Normal School has no power to dispense with this condition. Students in Arts about to graduate and desirous of securing the Academy diploma of the Normal School are recommended to arrange with the Principal for fulfilling this condition during the earlier part of the Session.

MODEL SCHOOLS OF THE McGILL NORMAL SCHOOL.

Boys' School.—Thomas B. Smiley, *Acting Head Master.*

Selina Sloane,
Elizabeth Reid, } *Assistants.*

Girls' School.—Jane E. Swallow, *Head Mistress.*

Mary J. Peebles,
Louisa McNaughton, *Assistants.*

Primary School.—Lucy H. Derick, *Head Mistress.*
Marion Taylor, *Assistant.*

These Schools can accommodate about 300 pupils, are supplied with the best furniture and apparatus, and conducted on the most modern methods of teaching. They receive pupils from the age of six and upwards, and give a thorough English Education. Fees, Boys' and Girls' Model Schools, 25c. to 40c. per week ; Primary School, 20c. ; payable weekly in advance.

BENEFACTORS OF

McGill University, Montreal.

I. ORIGINAL ENDOWMENT, 1811.

THE HONORABLE JAMES McGILL, who was born at Glasgow, 6th Oct., 1744, and died at Montreal, 19th Dec., 1813, by his last will and testament, under date 8th January, 1811, devised the Estate of Burnside, situated near the City of Montreal, and containing forty-seven acres of land, with the Manor House and Buildings thereon erected, and also bequeathed the sum of ten thousand pounds in money unto the "Royal Institution for the advancement of Learning," a Corporation constituted in virtue of an Act of Parliament passed in the Forty-first Year of the Reign of His Majesty, King George the Third, to erect and establish a University or College, for the purpose of Education and the advancement of learning in the Province of Lower Canada, with a competent number of Professors and Teachers to render such Establishment effectual and beneficial for the purposes intended; requiring that one of the Colleges to be comprised in the said University should be named and perpetually be known and distinguished by the appellation of "McGill College."

The value of the above-mentioned property was estimated at the date of the bequest at.....$120,000

II. UNIVERSITY BUILDINGS.

THE WILLIAM MOLSON HALL, being the west wing of the McGill College buildings, with the connecting Corridors and Class Rooms, was erected in 1861, through the munificent donation of the founder whose name it bears.

THE PETER REDPATH MUSEUM, the gift of the donor whose name it bears, was announced by him as a donation to the University in 1880, and was formally opened to the public, August, 1882.

III. THE DONALDA ENDOWMENT FOR THE HIGHER EDUCATION OF WOMEN.

This endowment, given by the Honorable Sir Donald A. Smith of Montreal, is for the education of women in the subjects of the Faculty of Arts up to the standard of the examination for B. A., in classes wholly separate, to constitute a separate Special Course or College for women,—$120,000.

IV. ENDOWED CHAIRS.

THE MOLSON CHAIR OF ENGLISH LANGUAGE AND LITERATURE, in 1856, endowed by the Honorable John Molson, Thomas Molson, Esq., and William Molson, Esq., —$20,000.

THE PETER REDPATH CHAIR OF NATURAL PHILOSOPHY, in 1871, endowed by Peter Redpath, Esq.,—$20,000.

THE LOGAN CHAIR OF GEOLOGY, in 1871, endowed by Sir W. E. Logan, LL.D., F.R.S., and Hart Logan, Esq.,— $20,000.

THE JOHN FROTHINGHAM CHAIR OF MENTAL AND MORAL PHILOSOPHY, in 1873, endowed by Miss Louisa Frothingham,—$20,000.

THE WILLIAM SCOTT CHAIR OF CIVIL ENGINEERING, in 1884, endowed by the last will of the late Miss Barbara Scott, of Montreal,—$30,000.

THE MAJOR HIRAM MILLS CHAIR OF CLASSICS, in 1882, endowed by the last will of the late Major Hiram Mills of Montreal,—$42,000.

THE DAVID J. GREENSHIELDS CHAIR OF CHEMISTRY AND MINERALOGY, in the Faculties of Arts and Applied Science, in 1883, endowed by the last will of the late David J. Greenshields, Esq., of Montreal,—$40,000.

THE GALE CHAIR, in the Faculty of Law, endowed by the late Mrs. Andrew Stuart (née Agnes Logan Gale), of Montreal, in memory of her father, the late Honorable Mr. Justice Gale,—$25,000 ; part received, May, 1888.

V. EXHIBITIONS AND SCHOLARSHIPS.

THE JANE REDPATH EXHIBITION, in the Faculty of Arts, $100 annually—founded in 1868 by Mrs. Redpath, of Terrace Bank, Montreal, and endowed with the sum of $1,667.

THE MCDONALD SCHOLARSHIPS AND EXHIBITIONS, 10 in number, in the Faculty of Arts—founded in 1871, and endowed in 1882, with the sum of $25,000, by William C. McDonald, Esq.—Annual value, $1,250.

THE CHARLES ALEXANDER SCHOLARSHIP, for Classics—founded in 1871, by Charles Alexander, Esq.—Annual value, $120.

THE SCOTT EXHIBITION—founded by the Caledonian Society of Montreal, in commemoration of the Centenary of Sir Walter Scott, and endowed in 1872 with th sum of $1,100, subscribed by members of the Society, and other citizens of Montreal. The Exhibition is given annually in the Faculty of Applied Science. Annual value $60.

THE BARBARA SCOTT SCHOLARSHIP FOR CLASSICAL LANGUAGE AND LITERATURE--founded by the last will of the late Miss Barbara Scott of Montreal, in the sum of $2,000 :—in 1884. Annual value, $100.

THE GEORGE HAGUE EXHIBITION—founded in 1881 in the Faculty of Arts. Annual value $125.

THE MAJOR HIRAM MILLS MEDAL AND SCHOLARSHIP.—in the Faculty of Arts, founded by the will of the late Major Hiram Mills of Montreal, and endowed with the sum of $1,500.—Annual value $75.

VI. ENDOWMENTS OF MEDALS AND PRIZES.

In 1856 Henry Chapman, Esq., founded a gold medal, to be named the "Henry Chapman Gold Medal," to be given annually in the graduating class in Arts. This Medal was endowed by Mr. Chapman in 1874, with the sum of $700.

In 1860 the sum of £200, presented to the College by H. R. H. the Prince of Wales, was applied to the foundation of a Gold Medal, to be called the "Prince of Wales Gold Medal," which is given in the graduating class for Honour Studies in Mental and Moral Philosophy.

In 1864 the "Anne Molson Gold Medal" was founded and endowed by Mrs. John Molson, of Belmont Hall, Montreal, for an Honour Course in Mathematics and Physical Science.

In the same year the "Shakespeare Gold Medal," for an Honour Course, to comprise and include the works of Shakespeare and the Literature of England, from his time to the time of Addison, both inclusive, and such other accessory subjects as the Corporation may from time to time appoint—was founded and endowed by citizens of Montreal, on occasion of the three hundredth anniversary of the birth of Shakespeare.

In the same year the "Logan Gold Medal," for an Honour Course in Geology and Natural Science, was founded and endowed by Sir William Logan, LL.D., F.R.S., F.G.S., &c.

In 1865 the "Elizabeth Torrance Gold Medal" was founded and endowed by John Torrance, Esq., of St. Antoine Hall, Montreal, in memory of the late Mrs. John Torrance, for the best student in the graduating class in Law, and more especially for the highest proficiency in Roman Law.

In the same year the "Holmes Gold Medal" was founded by the Medical Faculty, as a memorial of the late Andrew Holmes, Esq., M.D., LL.D., late Dean of the Faculty of Medicine, to be given to the best student in the graduating class in Medicine, who shall undergo a special examination in all the branches, whether Primary or Final.

In 1874 a Gold and Silver Medal were given by his Excellency the Earl of Dufferin, Governor General of Canada, for competition in the Faculty of Arts, and continued till 1878.

In 1878 the "Sutherland Gold Medal" was founded by Mrs. Sutherland of Montreal, in memory of her late husband, Prof. William Sutherland, M.D., for competition in the classes of Theoretical and Practical Chemistry in the Faculty of Medicine, together with creditable standing in the Primary Examinations.

In 1875 the "Neil Stewart prize of $20 in Hebrew" was endowed by Neil Stewart, Esq., of Vankleek Hill, in the sum of $340.

In 1880 a Gold and Silver Medal were given by His Excellency the Marquis of Lorne, Governor General of Canada, the former for competition in the Faculty of Arts, the latter for competition in the Faculty of Applied Science; continued till 1883.

In 1883 a Gold, Silver and Bronze Medal were given by R. J. Wicksteed, Esq., M.A., LL.D., for competition in "Physical Culture" by Students in the Graduating Class and 2nd and 3rd years, who have attended the University Gymnasium.

In 1884 a Gold and a Silver Medal were given by His Excellency the Marquis of Lansdowne, Governor General of Canada, the former for competition in the Faculty of Arts, the latter for competition in the Faculty of Applied Science. Continued till 1888.

In 1885 the British Association Gold Medal for competition in the Graduating class in the Faculty of Applied Science, was founded by subscription of members of the British Association for the Advancement of Science, and by gift of the council of the Association, in commemoration of its meeting in Montreal in the year 1884.

VII. SUBSCRIPTIONS TO GENERAL ENDOWMENT.

1856.

John Gordon McKenzie, Esq	$2000	Charles Alexander, Esq	$600
Ira Gould, Esq	2000	Moses E. David, Esq	600
John Frothingham, Esq	2000	Wm. Carter, Esq	600
John Torrance, Esq	2000	Thomas Patton, Esq	600
James B. Greenshields, Esq	1200	Wm. Workman, Esq	600
William Busby Lambe, Esq	1200	Honourable Sir A. T. Galt	600
Sir George Simpson, Knight	1000	Honourable Luther H. Holton	600
Henry Thomas, Esq	1000	Henry Lyman, Esq	600
John Redpath, Esq	1000	David Torrance, Esq	600
James McDougall, Esq	1000	Edwin Atwater, Esq	600
James Torrance, Esq	1000	Theodore Hart, Esq	600
Honourable James Ferrier	1000	William Forsyth Grant, Esq	600
Harrison Stephens, Esq	1000	Robert Campbell, Esq	600
Henry Chapman, Esq	600	Alfred Savage, Esq	600
Honourable Peter McGill	600	James Ferrier, jun., Esq	600
John James Day, Esq	600	William Stephen, Esq	600
Thomas Brown Anderson, Esq	600	N. S. Whitney, Esq	600
Peter Redpath, Esq	600	William Dow, Esq	600
Thomas M. Taylor, Esq	600	William Watson, Esq	600
Joseph McKay, Esq	600	Edward Major, Esq	600
Donald Lorn McDougall, Esq	600	Honourable Charles Dewey Day	200
Honourable Sir John Rose	600	John R. Esdaile, Esq	200

1871.

William Molson, Esq	$5000	T. W. Ritchie, Esq	$600
William C. McDonald, Esq	5000	Messrs. A. & W. Robertson	600
Thomas Workman, Esq	5000	Messrs. Sinclair, Jack & Co	250
John Frothingham, Esq	5000	John Reddy, Esq., M.D	100
J. H. R. Molson, Esq	5000	Wm. Lunn, Esq	100
John McLennan, Esq	2000	Kenneth Campbell, Esq	100
B. Gibb, Esq	600	R. A. Ramsay, Esq	100
W. Notman, Esq	600	William Rose, Esq	50

1881—82.

Hugh McLennan, Esq	$5000	O. S. Wood, Esq	$1000
G. A. Drummond, Esq	4000	J. S. McLachlan, Esq	1000
George Hague, Esq	3000	J. B. Greenshields, Esq.(London.)	1000
M. H. Gault, Esq	2000	Warden King, Esq	1000
Andrew Robertson, Esq	1000	W. B. Cumming, Esq	1000
Robertson Campbell, Esq	1000	Mrs. Hew Ramsay	500
J. Hickson., Esq., Mrs. Hickson..	1000	R. A. Ramsay, Esq	500
Mrs. Andrew Dow	1000	H. H. Wood, Esq	500
Alexander Murray, Esq	1000	James Burnett, Esq	500
Miss Orkney	1000	Charles Gibb, Esq	500
Hector MacKenzie, Esq	1000		

1883—84.

Edward Mackay, Esq $5000

VIII. SUBSCRIPTIONS FOR CURRENT EXPENSES IN 1881-82.

Principal Dawson	$1000	Being	$1000
J. H. R. Molson, Esq	1000	Per annum, 5 years being	5000
George Stephen, Esq	1000	" "	5000
Hon. Donald A. Smith	1000	" "	5000
David Morrice, Esq	200	" "	1000
Messrs. Gault Brothers & Co	200	" "	1000
Messrs. A. S. & S. H. Ewing	200	" "	1000
Hon. Robert Mackay	300	Per annum, 2 years, being	600
Jonathan Hodgson, Esq	100	Per annum, 5 years, being	500
Geo. M. Kinghorn, Esq	100	" " "	500
Thomas Craig, Esq	100	Per annum, 2 years, being	200
John Rankin, Esq	200	Being	200
John Duncan, Esq	200	"	200
Robert Benny, Esq	100	"	100
Miss E. A. Ramsay	100	"	100
Hugh Paton, Esq	50	For 2 years, being	100
George Brush, Esq	25	For 5 years, being	125
J. M. Douglas, Esq	50	Being	50
James Court, Esq	50	"	50
David J. Greenshields, Esq	300	"	300

1887-8.

John H. R. Molson, Esq	$1000	Per annum, 3 years, being	$3000
W. C. McDonald, Esq	1000	" " "	3000
Peter Redpath, Esq	1000	" " "	3000
Hon.Sir Donald A.Smith,K.C.M.G	1000	" " "	3000
Hon. Jas. Ferrier	500	" " "	1500
Joseph Hickson, Esq	500	" " "	1500
Hugh McLennan, Esq	250	" " "	750
E. B. Greenshields, Esq	250	" " "	750
George Hague, Esq	250	" " "	750
John Molson, Esq	250	" " "	750
Samuel Finley, Esq	250	" " "	750

IX. ENDOWMENT FOR FACULTY OF APPLIED SCIENCE, 1871.

Daniel Torrance, Esq	$5000
George Moffatt, Esq	1000
Charles J. Brydges, Esq	1000

X. ANNUAL SUBSCRIPTIONS IN AID OF THE FACULTY OF APPLIED SCIENCE, 1871-1879.

Hon. James Ferrier (per annum, for 10 years)	$100
Peter Redpath, Esq (per annum, for 10 years)	400
John H. R. Molson, Esq. (per annum, for 10 years)	400
George H. Frothingham, Esq. (per annum, for 7 years)	400
T. James Claxton, Esq. (per annum, for 6 years)	100
Donald Ross, Esq. (per annum, for 5 years)	50

Miss Mary Frothingham (per annum, for 3 years)	400
H. McLennan, Esq. (per annum, for 5 years)	100
A. F. Gault, Esq. do do	100
Gilbert Scott, Esq., for 2 years	100
Joseph Hickson, Esq., do	100
Principal Dawson, do	300
His Excellency the Marquis of Lorne	500
Mrs. Redpath (Terrace Bank)	100

To provide assistance in Mechanical Engineering, 1882-83.

E. B. Greenshields, Esq	$50
J. E. Bovey, Esq	50
Professor H. T. Bovey	61
Smaller amounts	40

XI. SUBSCRIPTIONS FOR SPECIAL OBJECTS.

For the support of the Chair of Botany, 1883-84.

Principal Dawson	$500	Per annum, 5 years, being			$2500
Hon. D. A. Smith	250	"	"	"	1250
J. H. R Molson, Esq	100	"	"	"	500
Mrs. J. H. R. Molson	100	"	"	"	500
G. Hague, Esq	100	"	"	"	500
Mrs. Redpath	100	"	"	"	500
Hugh McKay, Esq	100	"	"	"	500
Robert Moat, Esq	100	"	"	"	500
W. C. McDonald, Esq	100	"	"	"	500
Charles Gibb, Esq	50	"	"	"	250
Miss Orkney	50	"	"	"	250
Robert McKay, Esq	50	"	"	"	250
Mrs. Molson	50	"	"	"	250
Mrs. John Molson	50	"	"	"	250
John Stirling, Esq	50	"	"	"	250
Warden King, Esq	50	"	"	"	250
Miss Hall	50	"	"	"	250
Robert Angus, Esq	50	"	"	"	250
D. A. P. Watt, Esq	50	"	"	"	250
Hugh McLennan, Esq	25	"	"	"	125
Joseph Hickson, Esq	10	"	"	"	50
Mrs. Philips					10

For the purchase of Philosophical Apparatus, 1867.

William Molson, Esq	$500	John Frothingham, Esq	$100
John H. R. Molson, Esq	500	David Torrance, Esq	100
Peter Redpath, Esq	500		
George Moffat, Esq	250		$2,000
Andrew Robertson, Esq	100		

For a Building for the Carpenter Collection of Shells, 1868.

Peter Redpath, Esq	$500	Wm. Dow, Esq	$100
William Molson, Esq	500	Thos. Rimmer, Esq	100
Harrison Stephen, Esq	100	Andrew Robertson, Esq	100
Robert J. Reekie, Esq	100	Mrs. Redpath	100
John H. R. Molson, Esq	100	Benaiah Gibb, Esq	50
Sir William E. Logan, F.R.S.	100	Honorable John Rose	50
John Molson, Esq	100		
Thos. Workman, Esq., M.P	100		$2,200
Geo. H. Frothingham, Esq.	100		

For the Erection of the Lodge and Gates.

William Molson, Esq	$100	James A. Mathewson, Esq	$100
John H. R. Molson, Esq	100	Peter Redpath, Esq	100
William Workman, Esq	100	G. H. Frothingham, Esq	100
Joseph Tiffin, jr., Esq	100	G. D. Ferrier, Esq	100
Thos. J. Claxton, Esq	100	Geo. W. Warner, Esq	100
James Linton, Esq	100	John Smith, Esq	100
William McDougall, Esq	100	Charles Alexander, Esq	100
Charles J. Brydges, Esq	100	J. Evans, Esq	100
George A. Drummond, Esq	100	Henry Lyman, Esq	100
Thomas Rimmer, Esq	100		
William Dow, Esq	100		$2,100
John Frothingham, Esq	100		

For the fittings of the Library and Museum of the Faculty of Medicine, 1872.

G. W. Campbell, A.M., M.D	$1200	Robert Craik, M.D	200
W. E. Scott, M.D	200	Geo. E. Fenwick, M.D	200
Wm. Wright, M D	200	Joseph M. Drake, M.D.	200
Robert P. Howard, M.D	200	George Ross, M.A., M.D	50
Duncan C. McCallum, M.D	200		

For Library and Museum.

John Thorburn, for purchase of Books	$90	A Lady for Museum Expenses, in 1883-4 and '87.	3000
Andrew Drummond, do for Applied Science	25	Peter Redpath, Esq., for Museum Expenses, 1882, $1,000 ; '83, $1,000; '84, $1,000; '85, $1000; '86, $1,000 ; 1887, $1000.	6000
T. J. Claxton, Esq., for purchase of Specimens for Museum	250	A friend for the purchase of specimens for the Museum	1900
Mrs. H. G. Frothingham, for the arrangement of Dr. Carpenter's Collection of Mazatlan shells.	233	The Graduates in Arts and Applied Science of 1885 for purchase of Books	31
A Lady for Museum Expenses, in 1882	1000	Do of 1886	28
		The late R. A. Ramsay, Esq. Bequest for purchase of books	1000

For Apparatus.

A Lady for the purchase of Mining Models	$1000
Thos. McDougall, Esq., for the same	25
J. Livesey, Esq., through Dr. Harrington, for the same	50
Geo. Stephen, Esq., for the same	50
Charles Gibb, B.A., donation for Apparatus in Applied Science	50
Andrew Drummond, Esq., to Library Fund of Faculty of Applied Science	25
A Telescope and Astronomical Instruments, the gift of Charles T. Blackman, Esquire, of Montreal, and called after his name.	
The Local Committee for the reception (1881) of American Society of Civil Engineers — For the purchase of appliances for the department of Civil Engineering in Faculty of Applied Science	475
Capt. Adams, Chemical Apparatus	10
J. H. Burland, B. A. Sc., Chemical Apparatus	25
Thos. J. Barron, B.A., Philosophical Apparatus	50

For Physiological Laboratory of Medical Faculty, 1879.

Dr. Campbell	$100	Dr. Ross	$50
Dr. Howard	100	Dr. Roddick	50
Dr. Craik	100	Dr. Buller	50
Dr. McCallum	100	Dr. Gardner	50
Dr. Drake	100	Dr. Osler	50
Dr. Godfrey	100		
Dr. McEachran, F.R.C.V.S	100		$ 950

Hon. C. Dunkin, M.P., in aid of the chair of Practical Chemistry	$1200	T. M. Thompson, Esq., $250 for two Exhibitions In September, 1871 ; $200 for two Exhibitions in 1872	$450
Principal Dawson, in aid of the same	1200	Rev. Colin C. Stewart, for the "Stewart Prize in Hebrew."	60
P. Redpath, Esq., do do	226		

THE TAYLOR SCHOLARSHIP—founded in 1871, by T. M. Taylor, Esq.—Annual value, $100—terminated in 1878.

THE DAVID MORRICE SCHOLARSHIP—in the subject of Institutes of Medicine, in the Faculty of Medicine—founded in 1881—value $100. (Terminated in 1883.)

THE BURLAND SCHOLARSHIP—founded 1882, by J. H. Burland, Esq., $100 for a Scholarship in Applied Science, for three years, being $300.

PROFESSOR ALEXANDER JOHNSON—for Scholarship for 3 Sessions, terminated 1886-7 ..... $350

R. A. Ramsay, M. A., B.C.L., to defray the expenses of re-erecting the tomb of the late Hon. James McGill $150 00

XII. LIBRARY, MUSEUM AND APPARATUS FUNDS.

Wm. Molson, Esq., for Library Fund	$4000	A Friend, by the Hon. F. W. Torrance	$400
Wm. Molson, Esq., for Mueum Fund	2000	The Local Committee of the British Association for the Advancement of Science, to found the British Association Apparatus Fund in the Faculties of Arts and Applied Science, in commemoration of the meeting of the Association in Montreal in 1884	1500
Hon. F. W. Torrance, Mental and Moral Philosophy Book Fund	1000		
Mrs. Redpath, for the endowment of the Wm. Wood Redpath Library Fund	1000		

XIII. ENDOWMENT, HELD IN TRUST BY THE BOARD OF ROYAL INSTITUTION.

The "Hannah Willard Lyman Memorial Fund," contributed by subscription of former pupils of Miss Lyman, and invested as a permanent endowment, to furnish annually a Scholarship or Prize in a "College for Women" affiliated to the University ; or in classes for the Higher Education of Women approved by the University. The amount of the fund is at present $1,100.

XIV. SPECIAL COLLECTIONS OF BOOKS PRESENTED TO THE LIBRARY.

1. The Peter Redpath Collection of Historical Books—presented by Peter Redpath, Esq., of Montreal, 2274 Volumes.
2. The Robson Collection of works in Archæology and General Literature, presented by Dr. John Robson, of Warrington, England, 3436 Volumes.
3. The Charles Alexander Collection of Classical Works, presented by C. Alexander, Esq., of Montreal, 221 Volumes.
4. Frederick Griffin, Esq., Q.C., Collection of Books, being the whole of his Library, bequeathed by his will, 2695 Volumes.
5. The Hon. Mr. Justice MacKay, Collection of Books, being the whole of his Library, 2007 Volumes.
6. The "T. D. King Shakespeare Collection," presented by the Hon. Donald A. Smith and W. C. MacDonald, Esq., of Montreal, being 214 Volumes.

XV. SPECIAL COLLECTIONS PRESENTED TO THE MUSEUM.

1. The Holmes Herbarium—presented by the late Andrew F. Holmes, M.D.
2. The Carpenter Collections of Shells—presented by the late P. P. Carpenter, Ph. D.
3. The Collection of Casts of Ivory Carvings issued by the Arundel Society—presented by Henry Chapman, Esq.
4. The McCulloch Collection of Birds and Mammals, collected by the late Dr. M. McCulloch, of Montreal, and presented by his heirs.
5. The Logan Memorial Collections of Specimens in Geology and Natural History, presented by the heirs of the late Sir W. E. Logan, LL. D., F.R S.
6. The Dawson Collection in Geology and Palæontology, being the Private Collections of Principal Dawson, presented by him to the Museum.
7. The Portrait of Peter Redpath, Esq., painted by Mr. Sidney Hodges of London and presented by Citizens of Montreal.
8. The Bowles Collection of Lepidoptera, presented by W. C. McDonald, Esq., and J. H. Burland, Esq.

(See also "List of Donations to the Library and Museum," printed annually in the Calendar and Report of the Museum.)

XVI. ENDOWMENTS OF THE FACULTY OF MEDICINE.

I. Leanchoil Endowment.

Honorable Donald A. Smith $50,000

II. Campbell Memorial Endowment.

Established to commemorate the services rendered to the Faculty during forty years by the late Dean George W. Campbell, M. D., LL.D.

Mrs. G. W. Campbell	$2000	Hugh McLennan, Esq.	$1000
H. A. Allan	1500	O. S. Wood, Esq	1000
Hon. D. A. Smith	1500	James Burnett, Esq	500
George Stephen, Esq	1000	Andrew Robertson, Esq	500
R. B. Angus, Esq	1000	Robt. McKay, Esq	500
George Drummond, Esq	1000	John Hope, Esq	500
Alex. Murray, Esq	1000	Alex. Urquhart, Esq	500
Robt. Moat, Esq	1000	E. K. & G. A. Greene, Esqrs	500
W. C. McDonald, Esq	1000	R. A. Smith, Esq	500
A Friend	1000	Geo. Hague, Esq	500
Duncan McIntyre, Esq	1000	J. K. Ward, Esq	500
Alex. Buntin, Esq	1000	Warden King, Esq	500
A. F. Gault, Esq	1000	John Sterling, Esq	500
M. H. Gault, Esq	1000	John Rankin, Esq	500
G. W. Stephens, Esq	1000	Cantlie, Ewan & Co	500
James Benning, Esq	1000	Robt. Reford	500
R. P. Howard, M. D	1000	J. & W. Ogilvie	500
Frank Buller, M. D	1000	Randolf Hersey, Esq	500
G. B. & J. H. Burland, Esqrs	1000	John A. Pillow, Esq	500
Miss Elizabeth C. Benny	1000	S. Carsley, Esq	500
J. C. Wilson, Esq	1000	D. C. McCallum, M.D	500
Mrs. John Redpath	1000	McLachlan Bros	500
Hon. John Hamilton	1000	S. Greenshields, Son & Co	500
Miss Orkney	1000	Jonathan Hodgson, Esq	500
Hugh McKay, Esq	1000	Duncan McEachran, Esq., F.R.C. V.S	500
Hector McKenzie, Esq	1000	Geo. Ross, M.D	500
Thomas Workman, Esq	1000		

EXTRACT FROM THE DEED OF GIFT OF THE HON. SIR DONALD A. SMITH, K.C.M.G., LL.D., TO McGILL UNIVERSITY.

(October 16th, 1886.)

This donation is hereby made upon the following conditions, which are of the essence thereof, and without which the same would not have been made, namely:—

1st. That the said Donation shall be known and designated as "The Donalda Endowment for the Higher Education of Women," and that the amount thereof shall be invested by the Donee, and the income thereof shall be used in providing a collegiate education for women. Such education shall for the present be conducted in the buildings of the McGill College itself, as a distinct Special Course in the Faculty of Arts, but as soon as practicable the Classes shall be erected into a separate College of McGill University for the higher education of women, with a separate building from that of McGill College. And it is the desire of the Donor that effectual provisions be made by means of the appointment of a Principal, or other local head, for the management of the internal economy and discipline of the said College.

2nd. That in the said Special Course, due provision shall be made by the Governors and Corporation of McGill University for the conduct and management of classes for women entirely separate from the classes for men, and that no portion of the endowment hereby granted shall at any time be applied either directly or indirectly to sustain mixed classes of the two sexes.

3rd. That the standard of education of women in said course shall be the same as that for men for the ordinary degrees of the said University in Arts, as already arranged by the authorities of the said McGill College, and as announced in the Calendar for 1886 and 1887. But such modifications may hereafter be made in the course of study from time to time as the Corporation of McGill University may deem expedient in the interest of the women pupils, but without reducing the standard of education hereby fixed. And the Degrees to be granted to women shall be those of B.A., M.A., and LL.D., which shall be so granted to them on the same conditions as to men, except as to their eligibility as Fellows, and the examinations for such Degrees and for classing, honors, prizes and medals shall be identical with those for men.

4th. That the women undergraduates shall have the right, at their option, to enter the honor classes in the Third and Fourth Years on the same terms and conditions upon which men may do so.

Observatory.

Latitude, N. 45° 30′ 17″. Longitude, 4^h 54^m 18_s .55.
Height above sea level 187 ft.

Superintendent.—C. H. McLeod, Ma.E.

Assistant Superintendent.—G. H. Chandler, M. A.

Assistant.—E. H. Hamilton, B. A. Sc.

Meteorological Odservations are made every fourth hour, beginning at 3^h 0^m Eastern standard time. Independent bi-hourly temperature observations are also made. The principal instruments employed are the following:—Two standard mercurial barometers; one Kew standard thermometer; two Pastorelli thermometers; one maximum thermometer; one minimum thermometer; one set of six self-recording thermometers, with controlling clock battery, etc.; two anemometers; one wind vane (wind-mill pattern); one anemograph, with battery, etc.; one sunshine recorder; one rain-band spectroscope; one rain gauge; and several spare thermometers.

The Anemometer and Vane are on the summit of Mount Royal, at a point about three-quarters of a mile north-west of the Observatory. They are 57 feet above the surface of the ground and 810 feet above sea level.

The Astronomical Equipment consists of:—The Blackman Telescope (6¼ in.); a photoheliograph (4½ in.); a 3¼ in. transit, with striding level; two 2 in. transits, arranged as collimating telescopes; one sidereal clock; one mean-time clock; one sidereal chronometer; one mean-time chronometer; one chronograph; batteries, telegraph lines and sundry minor instruments.

Observations for clock errors are made on nearly every clear night. Time exchanges are regularly made with the Toronto Observatory. Time signals are distributed throughout the city by means of the noon time-ball, continuous clock signals and the fire alarm bells; and to the country, through the telegraph lines.

The photoheliograph, which has only recently been purchased, will be employed to obtain a photograph of the sun, once on each clear day.

The Blackman telescope is employed in occasional work and for educational purposes.

University Gymnasium.

The classes, which are open to Students of all the Faculties, will meet at the University gymnasium, at hours to suit, as far as possible, the convenience of Students, and which will be announced at the commencement of the Session.

THE WICKSTEED GOLD, SILVER AND BRONZE MEDALS FOR PHYSICAL CULTURE (the gift of Dr. R. J. Wicksteed) are offered for competition to students of the graduating class, and to students who have had instruction in the gymnasium for two sessions, the gold medals to the former, the silver and bronze medals to the latter.

The award of these medals is made by Judges, appointed by the Corporation of the University.

Every competitor for the gold medal is required to lodge with the Judges, before the examination, a certificate of good standing in the graduating class, signed by the Dean or Secretary of the Faculty to which he belongs, and the medal will not be awarded to any student who may fail in his examination for the degree.

University Societies.

THE GRADUATES' SOCIETY OF McGILL UNIVERSITY.

INCORPORATED 1880.

OFFICERS FOR 1888-89.

President: Selkirk Cross, B.A. B.C.L.

Vice-Presidents: T. Wesley Mills, M.D.; C. J. Fleet, B.A., B.C.L.; W. T. Skaife, B. A. Sc.

Secretary: A. Falconer, B.A., B.C.L.

Treasurer: C. H. McLeod, M.E., McGill College.

Resident Councillors: Jas. Stewart, M.D.; Rev. E. M. Taylor, M.A.; W. W. Lynch, B.C.L., Q.C., M.P.P.; M. Hutchinson, D.C.L.; A. McGoun, jr., B.A., B.C.L.; W. Dixon, B.A.

Non-Resident Councillors: Rev. E. I. Rexford, M.A., Quebec; Robt. Bell, B. Ap. Sc., M.D., Ottawa; Chas. Gibb, B.A., Abbotsford, Que.; Hamilton Cassils, B.A., Toronto; Rev. W. J. Dey, M.A., Hamilton; Wm. Osler, M.D., Philadelphia.

UNDERGRADUATES' LITERARY SOCIETY.

CONSTITUTED 1880.

The object of this Society is the mutual improvement of its members, by means of debates, essays, readings, &c. The Society is open for membership to all students attending the classes in any of the Faculties of McGill College.

President:
J. A. McPHAIL.

Vice-Presidents:
H. PEDLEY. | M. F. LUCAS.

Secretary.
JAS. A. ELLIOTT.

Assistant Secretary.
J. M. McGREGOR.

Treasurer.
W. D. GIBSON.

McGILL COLLEGE YOUNG MEN'S CHRISTIAN ASSOCIATION.

OBJECT.—To unite in an Association all who are interested in the cause of religion, for the purpose of mutual help in the Christian life, and for the promotion of good morals and Christian living in the College.

MEMBERSHIP.—Open to Students of all the Faculties. Membership is of two kinds: Active—Open to a member of an Evangelical church; Associate—Open to any young man of good moral character. A social reception is given to new students at the beginning of the session.

Hon. President.
SIR J. W. DAWSON, LL.D.

President:
D. J. EVANS, 2nd Year Med.

1st Vice-President.
H. M. TORY, 2nd Arts.

2nd Vice-President.
W. F. HAMILTON, 1st Yr. Med.

Treasurer.
C. G. MAIN, 3rd Year Med.

Asst.-Treasurer.
J. W. DALEY, 2nd Yr. Arts.

Corresponding Secretary.
J. MACDOUGALL, B.A.

Recording Secretary.
A. H. HAWKINS, 2nd Ap. Sc.

McGILL UNIVERSITY ATHLETIC ASSOCIATION.

ESTABLISHED 1884.

Open for membership to undergraduates in this University.

President: SIR WILLIAM DAWSON.

Vice-President:
JOHN A. SPRINGLE.

Secretary:
W. W. MURRAY.

Treasurer:
B. J. HARRINGTON, B.A., Ph.D.

Assistant Treasurer: W. J. DELANEY.

IN AFFILIATION.

McGill Football Club.
Secy.: M. F. LUCAS.

McGill Hockey Club.
Secy.: D. B. HOLDEN.

Annual Field Meeting 19th October, 1888, comprising a programme of 21 events.

DELTA SIGMA SOCIETY.

OBJECT.—Mutual improvement by means of debates, Essays, &c., Open for membership to students of the Donalda Special Course for women.

President: Octavia G. Ritchie.
Vice-President: Maude Squire.
Secretary-Treasurer: Jeannie T. Botterell.
Assistant Secretary: Louise C. Smith.
Committee: Misses McFee, Evans, and Abbott.

THEO DORA SOCIETY.

Principal object for the present, the diffusion of information respecting Christian Missions, and the cultivation of a Missionary Spirit. Open for membership to students of the Donalda Special Course for women.

President: C. M. Derick.
Vice-President: J. Palmer.
Secretary-Treasurer: Inez R. Botterell.

McGILL COLLEGE BOOK CLUB.

ESTABLISHED A.D. 1869.

This Club, now in the twentieth year of its existence, has for its primary object,—" to procure an early supply of new books (novels excluded) for its members ;" and, next, the increase of the College Library by the presentation thereto of these books, when no longer required by the Club. In this way, an addition has already been made to the Library of not less than 3402 volumes, in special and general literature.

Membership in the Club is open to all, at an annual subscription of ten dollars. Apart from the advantages to be directly derived from membership, there is the special privilege accorded to members of using the College Library on the same conditions as Graduates, and without making any deposit when books are borrowed. As the number of volumes in the Library now amounts to 27,000, it is clear that this privilege is of value both to special and to general readers.

The members of the Executive Committee are Dr. Johnson, Dr. Cornish, Dr. Murray, Mr. S. E. Dawson, Mr. W. M. Ramsay and Mr. D. A. Watt, to any of whom applications for membership may be addressed ; or to Mr. E. M. Renouf, at the Club Depository, 2240 St. Catherine street.

UNIVERSITY CLUB.

ROOMS, 8 UNIVERSITY STREET, MONTREAL.

Hon.-President : B. J. Harrington, Ph. D.
President : Chas. E. Moyse, M.A.
Vice-President : Jeffrey H. Burland, B. Ap. Sc.
Treasurer : J. F. Mackie, B.A , B.C.L.
Secretary : A. Falconer, B.A., B.C.L.
Committee : T. W. Mills, M.A., M.D., ; A. J. Eaton, M.A., Ph.D.; R. C. Smith, B.C.L.

ADDENDA AND SPECIAL NOTICES.

FACULTY OF ARTS.—Attention is requested to the new regulation respecting *French* on p. 70, and to those relating to *June Examinations* for entrance (June 3rd, and following days), pp. 29, 32 and 131. Schools not in the Province of Quebec, desiring to have candidates examined locally, should apply to the Secretary before May 1st, stating the names of gentlemen willing to act as Deputy Examiners. Changes made in relation to *Honour Studies* are stated in pp. 45, 47.

No definite announcement can yet be made respecting the contemplated *College for Women;* but the Donalda Special Course will be continued under the existing regulations, providing separate classes in all respects similar to those for men, and leading to the degree of B.A. The Trafalgar Institute has made arrangements to give special attention to pupils from the country desiring to prepare for the College classes.

FACULTY OF APPLIED SCIENCE.—It is expected that the classes will be opened next session in new and commodious class-rooms in the East wing of the College Building. For June Matriculation in Applied Science, see p. 91.

FACULTY OF MEDICINE.—The special attention of intending students is requested to the various requirements of Provincial Boards as to examination for entrance to study. (See pp. 98 et seq.) Those having any doubts as to these requirements may communicate with the Secretary of the Faculty, Dr. Stewart, 873 Dorchester street, Montreal.

FACULTY OF LAW.—Certain changes will be made in the hours of Lecture for the convenience of students, and it is expected that more convenient class-rooms will be secured. The special attention of young men preparing for business or engaged therein is invited to the provisions for admitting *Occasional Students.*

SCHOOL EXAMINATIONS.—These are now imperative on all Academies and High Schools in the Province of Quebec. Information additional to that on pp. 131 et seq. can be obtained from Rev. E. I. Rexford, Education Office, Quebec. Schools not in Quebec, and private schools, should communicate with the Secretary of the University.

AFFILIATED THEOLOGICAL COLLEGES.—All information respecting these, and also respecting the exemptions from fees granted to their students in the University, may be obtained of their Principals.

MCGILL NORMAL SCHOOL.—Attention is directed to the new arrangement for Academy Diplomas, whereby students having passed the examinations in the Model School class, and recommended by the Principal, may enter in the first year of the University course. All information may be obtained of Dr. Robins, Principal of the Normal School, Belmont street, Montreal.

Where any doubt exists as to any of the provisions of the calendar, the necessary directions may be obtained on application to the Principal or Secretary, or to the proper officers representing the several Faculties and Affiliated Colleges and Schools.

CONTENTS.

PAGES.

GENERAL ANNOUNCEMENTS :—
Governing Body .... }
Officers of Instruction .... } 1 to 28
General Statement .... }
Calendar .... }

FACULTY OF ARTS :—
Regulations and Course of Study .... 28 to 71

DONALDA SPECIAL COURSE FOR WOMEN :—
Regulations and Course of Study .... 72 to 77

FACULTY OF APPLIED SCIENCE :—
Regulations and Course of Study .... 78 to 93

FACULTY OF MEDICINE :—
Regulations and Course of Study .... 95 to 121

FACULTY OF LAW :—
Regulations and Course of Study .... 123 to 130

UNIVERSITY SCHOOL EXAMINATIONS :—
For Associate in Arts .... 131 to 134

PASSED THE UNIVERSITY EXAMINATIONS .... 135 to 139

SCHOLARSHIPS AND EXHIBITIONS 140

PRIZES, HONOURS AND STANDING .... 141 to 162

GRADUATES OF THE UNIVERSITY .... 163 to 182

LIST OF STUDENTS .... 183 to 190

SCHOOL CERTIFICATES. (Associate in Arts, etc.) .... 191 to 201

DONATIONS TO LIBRARY AND MUSEUM .... 202 to 212

MCGILL NORMAL SCHOOL :—
Regulations and Course of Study .... 213 to 227

BENEFACTORS .... 228 to 229

OBSERVATORY 230

GYMNASIUM 231

UNIVERSITY SOCIETIES 231

ADDENDA 235

EXAMINATION PAPERS

OF THE

McGILL UNIVERSITY,

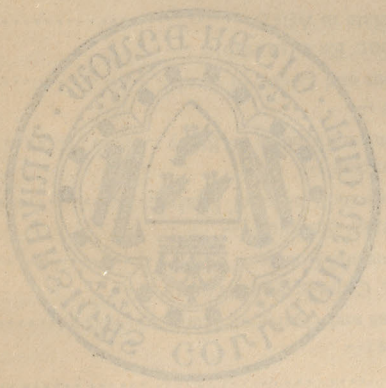
MONTREAL.



SESSION OF 1887-8.

Montreal:

PRINTED BY JOHN LOVELL & SON,
ST. NICHOLAS STREET.
1888.



ORDER OF EXAMINATION PAPERS.

1. FACULTY OF ARTS.

PAGE.

SCHOLARS AND EXHIBITIONS, 1887 5

SESSIONAL EXAMINATIONS, 1887.

CLASSICS :—*Ordinary* 66
" *Third Year Honour* 85
MATHEMATICS AND NATURAL PHILOSOPHY:—*Ordinary* 100
" " " " *Honour* 109
ENGLISH LANGUAGE LITERATURE:—*Ordinary* 113
" " " *Honour* 119
MENTAL AND MORAL PHILOSOPHY:—*Ordinary* 129
" " " " *Honour* 132
FRENCH:—*Ordinary* 135
" *Honour* 141
GERMAN 145
HEBREW 152
CHEMISTRY AND THE NATURAL SCIENCE (Botany—Zoology—Geology—Mineralogy and Lithology) :—
Ordinary 157
Honour 160

2. FACULTY OF MEDICINE.

MATRICULATION EXAMINATION, 1887 53

3. FACULTY OF APPLIED SCIENCE.

ENTRANCE, PRIZE AND EXHIBITION EXAMINATIONS 43
SESSIONAL EXAMINATIONS, 1887 167
ENGINEERING 174
DESCRIPTIVE GEOMETRY 195
SURVEYING, &c. 199

4. FACULTY OF LAW.

SESSIONAL EXAMINATIONS, 1887 211

5. UNIVERSITY SCHOOL EXAMINATIONS

PRELIMINARY SUBJECTS 217
OPTIONAL SUBJECTS 224

ENTRANCE EXAMINATIONS, 1887.

FACULTY OF ARTS.

MATRICULATION,

SCHOLARSHIPS AND EXHIBITIONS,

1887.

MATRICULATION EXAMINATION.

GREEK.

THURSDAY, SEPTEMBER 15TH :—MORNING, 9 TO 12.

Examiner,.....A. J. EATON M.A., PH.D.

N. B.—An option is allowed between the Questions in Groups (A) and (B).

(A)

Translate Xenophon, Anabasis, Book I. :—

Οὐ μὲν δὴ οὐδὲ τοῦτ' ἂν τις εἴποι ὡς τοὺς κακούργους καὶ ἀδίκους εἶα κατα-γελᾶν, ἀλλ' ἀφειδέστατα πάντων ἐτιμωρεῖτο. πολλάκις δ' ἦν ἰδεῖν παρὰ τὰς στειβομένας ὁδοὺς καὶ ποδῶν καὶ χειρῶν καὶ ὀφθαλμῶν στερομένους ἀν θρωπους· ὥστ' ἐν τῇ Κύρου ἀρχῇ ἐγένετο καὶ Ἕλληνι καὶ βαρβάρῳ μηδὲν ἀδικοῦντι ἀδεῶς πορεύεσθαι ὅπου τις ἤθελεν, ἔχοντι ὅ τι προχωροίη. τοίς γε μέντοι ἀγαθοὺς εἰς πόλεμον ὡμολόγητο διαφερόντως τιμᾶν. καὶ πρῶτον μὲν ἦν αὐτῷ πόλεμος πρὸς Πισίδας καὶ Μυσούς· στρατευόμενος οὖν καὶ αὐτὸς εἰς ταύτας τὰς χώρας οὓς ἑώρα ἐθέλοντας κινδυνεύειν, τούτους καί ἀρχοντας ἐποίει ἧς κατεστρέφετο χώρας, ἔπειτα δὲ καὶ ἄλλους ὥροις ἐτίμα. ὥστε φαίνεσθαι τοὺς μὲν ἀγαθοὺς εὐδαιμονεστάτους, τοὺς δὲ κακοὺς δούλους τούτων ἀξιοῦσθαι εἶναι. τοιγαροῦν πολλὴ ἦν ἀφθονία αὐτῷ τῶν ἐθελόντων κινδυνεύειν, ὅπου τις οἴοιτο Κῦρον αἰσθήσεσθαι.

1. Explain the case of πάντων, ποδῶν, ἀγαθούς, αὐτῷ.

2. Where are the following forms made, and explain any peculiarities: εἶα, καταγελᾶν, ὡμολόγητο, ἑώρα, ἐτίμα.

3. Account for the mood of the following verbs: εἴποι, προχωροίη.

4. Explain the construction of ἧς κατεστρέφετο χώρας.

(B)

Translate, Homer, Iliad, Book I :—

Τὸν δ' ἠμείβετ' ἔπειτα βοῶπις πότνια Ἥρη·
Αἰνέσατε Κρονίδη, ποῖον τὸν μῦθον ἔειπες.

καὶ λίην σε πάρος γ' οὔτ' εἴρομαι οὔτε μεταλλῶ,
ἀλλὰ μάλ' εὔκηλος τὰ φράζεαι ἄσσ' ἐθέλησθα.
νῦν δ' αἰνῶς δείδοικα κατὰ φρένα μή σε παρείπῃ
ἀργυρόπεζα Θέτις, θυγάτηρ ἁλίοιο γέροντος·
ἠερίη γὰρ σοί γε παρέζετο καὶ λάβε γούνων.
τῇ σ' οἴω κατανεῦσαι ἐτήτυμον ὡς Ἀχιλῆα
τιμήσῃς, ὀλέσῃς δὲ πολέας ἐπὶ νηυσὶν Ἀχαιῶν.'
τὴν δ' ἀπαμειβόμενος προσέφη νεφεληγερέτα Ζεύς·
" δαιμονίη, αἰεὶ μὲν ὀΐεαι, οὐδέ σε λήθω,
πρῆξαι δ' ἐμπης οὔ τι δυνήσεαι, ἀλλ' ἀπὸ θυμοῦ
μᾶλλον ἐμοὶ ἔσεαι· τὸ δέ τοι καὶ ῥίγιον ἔσται.
εἰ δ' οὕτω τοῦτ' ἐστὶν, ἐμοὶ μέλλει φίλον εἶναι.
ἀλλ' ἀκέουσα κάθησο, ἐμῷ δ' ἐπιπείθεο μύθῳ,
μή νύ τοι οὐ χραίσμωσιν ὅσοι θεοί εἰσ' ἐν Ὀλύμπῳ
ἀσσον ἰόντι,' ὅτε κέν τοι ἀάπτους χεῖρας ἐφείω."

1. Write the Attic forms of ἔειπες, φράζεα', πόλεας, ὀΐεαι.

2. From what present indicatives are δείδοικα, λάβε, τιμήσῃς, ὀλέσῃς, πρῆξαι, δυνήσεαι, formed?

3. Explain the case of ἐμοί, μύθῳ, γούνων.

4. Account for the mood of ἐθέλησθα, παρείπῃ, τιμήσῃς.

5. Divide 553, 554 into feet, marking the position of the principal caesura in each verse.

(C)

GREEK GRAMMAR.

Write Greek words with accents.

1. Decline ἀνθρωπος, χώρα, πατήρ, πόλις.

2. Decline ἐγώ, εἷς, μέγας, τίς.

3. Compare adjectives, σαφής, σόφος, ἡδύς, ἀγαθός.

4. Form adverbs from σόφος, πᾶς, πολύς.

5. Inflect the present, imperfect and perfect indicative, active, of λύω: second aorist middle of λείπω: present subjunctive, optative and imperative active of δίδωμι.

6. Give the principal parts of γράφω, τίθημι, στέλλω, φιλέω.

7. What prepositions may be used with the accusative, dative and genitive? Illustrate the use of one of these with each case, to show its change of meaning.

8. Distinguish between the imperfect, perfect and aorist, as past tenses: between the indicative, subjunctive and optative, in their general uses.

9. What do you mean by a final clause? How are such clauses expressed in Greek?

10. Where are these words made and form what present indicatives:—
ἔπαθεν, ἐγένετο, τιμᾶν, εἶναι, λελυσαι, λελοίπασι.

LATIN.

THURSDAY, SEPTEMBER 15TH:—AFTERNOON, 2 TO 5.

Examiner,.....A. J. EATON, M.A., PH.D.

N. B.—An option is allowed between Groups (A) and (B).

(A)

Translate, Virgil, Æneid I.:—

"Quisquis es, haud, credo, invisus cœlestibus auras
Vitales carpis, Tyriam qui adveneris urbem.
Perge modo, atque hinc te reginæ ad limina perfer.
Namque tibi reduces socios classemque relatam
Nuncio, et in tutum versis Aquilonibus actam,
Ni frustra augurium vani docuere parentes.
Aspice bis senos lætantes agmine cycnos,
Ætheria quos lapsa plagâ Jovis ales aperto
Turbabat cœlo; nunc terras ordine longo
Aut capere, aut captas jam despectare videntur:
Ut reduces illi ludunt stridentibus alis,
Et cœtu cinxere polum, cantusque dedere,
Haud aliter puppesque tuæ pubesque tuorum
Aut portum tenet, aut pleno subit ostia velo.
Perge modo, et, qua te ducit via, dirige gressum."

1. Give the principal parts of *carpis, perge, actam, cinxere, dedere.*

2. Explain the case of the following:—*urbem, classem, versis Aquilonibus, plaga, cœtu.*

3. Comment upon *cycnos, Jovis ales, vani.*

4. *Tyriam urbem:* what city is meant? To whom is this extract addressed, and by whom spoken?

5. *In tutum:* supply the ellipse.

(B)

Translate, Cicero, In Catilinam :—

Num infitiari potes te illo ipso die, meis praesidiis, mea diligentia circumclusum, commovere te contra rem publicam non potuisse, cum tu discessu ceterorum, nostra tamen qui remansissemus caede, te contentum esse dicebas? Quid? Cum te Praeneste Kalendis ipsis Novembribus occupaturum nocturno impetu esse confideres, sensistine illam coloniam meo jussu praesidiis custodiis vigiliis esse munitam? Nihil agis, nihil moliris, nihil cogitas, quod non ego non modo audiam, sed etiam videam planeque sentiam.

Recognosce tandem mecum noctem illam superiorem; jam intelleges multo me vigilare acrius ad salutem quam te ad perniciem rei publicae. Dico te priore nocte venisse inter falcarios—non agam obscure—in M. Laecae domum; convenisse eodem compluris ejusdem amentiae scelerisque socios. Num negare audes? quid taces? convincam, si negas. Video enim esse hic in senatu quosdam, qui tecum una fuerunt.

1. Where was *Praeneste?* Why would Catiline be likely to seize it?

2. What is the antecedent of *qui?* Explain the case of *illo die: meis praesidiis: compluris.*

3. What is the construction of *te* in *quam te ad perniciem?*

4. Principal parts of *confideres, agis, audes, convincam.*

5. What interrogative particles are found in the extract, and what is the force of each?

(C)

LATIN GRAMMAR.

1. Decline *totus orbis; respublica; ingens cura.*

2. What is the Vocative of *Gaius Julius Cæsar.*

3. Genitive plural of *dies, animal, senex;* dative plural of *vir* and *vis;* genitive, dative and ablative, singular and plural, of *domus.*

4. Decline *unus, quis.*

5. Give the principal parts of *eo, refero, premo, accingo, figo, fundo, loquor, pertimesco, requiro, desino.*

6. Inflect the present subjunctive and future indicative, active, of *moneo, rego, fero* and *eo.*

7. Give the imperative, second person, present tense, active and passive of *audio, dico.*

8. Name some perfect forms which are present in sense.

9. Distinguish between the *objective* and *subjective* genitive, and give examples.

10. What is the Latin for: *the rest of the army; I am consul; a longing* (desiderium) *for rest* (otium); *the crowns are golden; Cicero wrote on friendship.*

FIRST YEAR.

ENGLISH GRAMMAR.

MONDAY, SEPTEMBER 19TH:—MORNING, 9 TO 10.30.

Examiners,..... { CHAS. E. MOYSE, B.A.
PAUL T. LAFLEUR, M.A.

1. Name and define the parts of speech which admit of inflection.

2. Form Abstract Nouns from the following adjectives: pure, brief, intricate, morose, cleanly, relative.

3. Write the past tense, past participle, and present participle of:—seethe, cleave, drive, shear, prefer, sit, climb, omit.

4. State the various uses of the word "that." Illustrate each by example.

5. Classify Adverbs, giving an example for each class.

6. Parse every word in:—

The place, being neglected, soon fell to decay.

7. Analyse the following sentences:—

(*a*) Imperious Cæsar, dead and turned to clay,
Might stop a hole to keep the wind away.

(*b*) As soon as day dawned, we received orders to march against the foe.

SECOND YEAR.

N.B.—Candidates will answer questions 1, 3, 4, 5, 6 and 7 together with the following.)

8. Explain the difference between Transitive and Intransitive verbs. Illustrate by example.

9. Give the rules for the forming of the feminine gender in nouns, illustrating each rule by one example.

10. What is meant by "Nominative Absolute?" Explain fully its nature and use, and give an illustration.

FIRST YEAR.

ENGLISH HISTORY.

MONDAY, SEPT. 19TH:—MORNING, 10.30 TO 12.

Examiner,.....CHAS. E. MOYSE, B.A.

1. State in brief detail a few of the leading events during the Roman occupation.

2. Give a short account of the reign of Henry III.

3. Say when, why, between whom and with what result, each of the following battles was fought: Flodden, Pinkie, Culloden, Stoke, Dunbar, Sedgemoor.

4. Comment on benevolences, Bloody Assize, Solemn League and Covenant, Thorough, Field of the Cloth of Gold.

5. Mention the most important provision of Magna Charta. State in their order and assign to their respective reigns the leading parliamentary measures of the Stuart period. Briefly indicate the character of each.

SECOND YEAR.

[You are requested to answer questions 2, 3 and 5 of the First Year set and also the following:]

6. Give some account of England's foreign policy under Cromwell, James I and George II.

7. Notice the leading events of the history of Ireland in the reigns of Henry VIII., Elizabeth, Cromwell and George III.

(Examinations In Euclid, Arithmetic and Algebra *viva voce*.)

CLASSICAL AND MODERN LANGUAGE SCHOLARSHIPS.

GREEK

THURSDAY, SEPTEMBER 16TH :—MORNING, 9 TO 12.

Examiner,.....REV. GEORGE CORNISH, LL. D.

1. Translate :—(A) Euripides, Medea, vss. 908-928.

3. (*a*) Comment on the following in ext. (A) :—*παρεμπολῶντος. τὴν νικῶσαν βουλήν. ὑμῖν δε, παῖδες κ. τ. λ. τὰ πρῶτ' ἐσεσθαι. γυνὴ δὲ θῆλυ.* (*b*) Explain the meaning and construction of the following :—(*a*) *εἰσῆλθε μ' οἶκτος εἰ γενήσεται τάδε.* (*b*) *οὐκ οἶδ' ἂν εἰ πείσαιμι* (*c*) *κέλευσον αἰτεῖσθαι πατρὸς γυναῖκ : παῖδας τήνδε μὴ φεύγειν χθόνα.* (*d*) *ἃ καλλιστεύεται τῶν νῦν ἐν ἀνθρώποισιν.* (*c*) Write down the scale of the *Iambic Senarius*.

3. Translate :—(B) Demosthenes, Olynthiacs, I. § 29.

4. (*a*) *τῶν πολλῶν ὧν καλῶς ποιοῦντες ἔχουσι* :—explain the construction and meaning: (*b*) *ἀκεραίου*:—explain the usage and the etymology. (*c*) Write short explanatory notes on :—(1) *εὔθυναι ῥᾴδιαι.* (2) *ἐν ἡλικίᾳ.* (3) *εἰσφέροντας.* (4) *ἀνεχαίτισε.* (5) *πεφενάκικεν.* (6) *λειτουργίαι.* (7) *ὡ τᾶν.* (8) *χειρόήθεις.* (9) *τὰ θεωρικά.*

5. Translate :—(C) Thucydides, Bk. VI., chap. xxxi.

6. (*a*) *οὗτος ὁ στόλος*,—supply the verb to this nominative. (*b*) *ὅπως * * * προέξει*,—explain this use of the Fut. Ind. with *ὅπως*. *ὑπὸ κήρυκος, ἐπὶ κέρως, πρὸς τὰ ὑπάρχοντα, ἐπὶ μεταβολῇ* :—Give as accurately as you can the import of the prepositions as here used. (*d*) Write explanatory notes on :—(1) *τριηράρχων.* (2) *ὑπηρεσίας.* (3) *θρανίταις.* (4) *σημειοις.* (5) *καταλόγοις χρηστοῖς.* (6) *ἐπιβάται.*

7. Translate :—(D) Xenophon, Helienics, Bk. I. chap. vi., secs. 22-31.

8. (*a*) In what year of the Peloponnesian war did the events here recorded take place ? (*b*) Give the geographical situation of Argin usae, with a plan of the hostile fleets as here described.

9. Translate :—(E) Herodotus, Bk. VIII., chaps liv-lv. (For *ἐμπρήσαντα* there is a *var. lect. ἐμπρήσαντι* :—both an correct ; but which is the preferable reading, and why ?

10. (*a*) Distinguish between :—*οἱ σοφοὶ ἄνθρωποι, σοφοὶ οἱ ἀνθρωποι*, and *οἱ σοφοὶ τῶν ἀνθρώπων. ὁ οὐ πιστεύων* and *ὁ μὴ πιστεύων*. (*b*) State

the difference between :—(*a*) ἔβησα and ἔβην. ἑστητα and ἔστην. ἔφισα and ἔφυν. πέπεικα and πέποιθα. ὅλωλεκα and ὄλωλα. (*c*) The various meanings, according to their accent, of :—εἰμι, τιμησαι, νεων, οἰκοι, σιγα, βιος. Mention the forms in Latin cognate with :—χειμών, ἐαρ, αἰών, ἥλιος, ἄνεμος, ὄἰς, θύρα, σελήνη.

LATIN.

FRIDAY, SEPTEMBER 16TH :—MORNING, 9 to 12.

Examiner.....REV. GEORGE CORNISH, LL.D.

1. Translate :—(A) Tacitus, Annals, Book I., chap. xvii.

2. Analyse the construction of the following passages :—(*a*) Deorum injurias dis curæ (scripsit). (*b*) Dum veritati consulitur. (*c*) Quo levior classis vadoso mari innaret vel reciproco sideret. (*d*) Trudebantur in paludem gnaram vincentibus, iniquam nesciis, ni Cæsar productas legiones instruxisset. (*e*) Utque signis et aquilis per superbiam inluserit. (*f*) Give the various constructions of nouns with *illudere*.

3 Translate :—(B) Pliny, Select Letters :—

C. PLINUS SABINIANO SUO S.

Libertus tuus, cui succensere te dixeras, venit ad me advolutusque pedibus meis tamquam tuis hæsit. Flevit multum, multum rogavit, multum etiam tacuit, in summa fecit mihi fidem pœnitentiæ. Vere credo emendatum, quia deliquisse se sentit. Irasceris, scio, et irasceris merito, id quoque scio : sed tunc præcipua mansuetudinis laus, cum iræ causa iustissima est. Amasti hominem et, spero, amabis : interim sufficit ut exorari te sinas. Licebit rursus irasci, si meruerit, quod exoratus excusatius facies. Remitte aliquid adulescentiæ ipsius, remitte lacrimis, remitte indulgentiæ tuæ : ne torseris illum, ne torseris etiam te. Torqueris enim, cum tam lenis irasceris. Vereor ne videor non rogare, sed cogere, si precibus eius meas iunxero. Iungam tamen tanto plenius et effusius, quanto ipsum acrius severiusque corripui destricte minatus numquam me postea rogaturum. Hoc illi, quem terreri oportebat, tibi non idem. Nam fortasse iterum rogabo, impetrabo iterum : sit modo tale ut rogare me, ut præstare te deceat. Vale.

4. (*a*) Write a short account of the life and character of Pliny. (*b*) Instance from the New Test. an espistle similar to this.

5. Translate :—(C) Horace, Epistles I., ep. xviii., vss. 1-20.

6. (*a*) Construe *amicum*. (*b*) Scan vs. 3, pointing out any peculiarity of quantity in *meretrici*. (*c*) *Discolor* :—explain the custom here referred to. (*d*) *Infido scurræ* :—explain the construction. (*e*) *Imi lecti* :—explain, and illustrate by a sketch of the arrangement of the Roman dinner-table. (*f*) *Magistro* :—with what do you construe this? (*g*) *De lana caprina* :—Explain. (*h*) *Pretium* :—What case?

7. Translate :—(D) Virgil, Georgics, I., vss. 338—350. Give the name of the ceremony here described.

8. Translate :—(E) Terence, Adelphi, Act II., scene 4.

9. Analyse and parse the following verbs : siit, operiere, refrixerit, pepereris, consolere, reprensum, insuerit, cedo.

10. (*a*) Explain the use of the Dative with the verbs *vaco*, *nubo*, and *supplico*. (*b*) What is meant by the the *Dativus Ethicus?* (*c*) State the difference in meaning between :—*primus* dixit, *primum* dixit, and *primo* dixit. (*d*) When do you use *nostrum*, *vestrum*, and when *nostri*, *vestri?* (*e*) Write the principal parts of the following verbs :—crepo, lavo, juvo, maneo, luceo, pendeo, pendo, demo.

GREEK AND LATIN PROSE COMPOSITION.

THURSDAY, SEPTEMBER 15TH : — AFTERNOON, 2 TO 5.

Examiner,.....REV. GEORGE CORNISH, LL.D.

(A) Translate into Greek :—

1. After this battle the Athenians did very great injury to the whole country of the Lacedaemonians.

2. The soldiers marched out of the city in number about two thousand, and in no long time arrived in the enemy's country, which they at once began to ravage.

3. Man seems to differ from other animals in this, namely, in his striving after honour.

4. He said that he was willing to do those things, if by so doing he could benefit his fellow-citizens.

5. The being rich profits men nothing if they do not know how to make a wise use of their wealth.

(B) Translate into Latin :—

Whilst the Senonian Gauls were besieging Clusium, a town of Etruria, three ambassadors were sent from Rome to warn the Gauls to desist from

the siege. One of these, contrary to the law of nations, went forth to battle, and slew a chief of the Senones. Exasperated at this, the Gauls, after having in vain demanded the surrender of the ambassadors, set out for Rome, and overthrew the Roman army at the river Allia. They entered the city as conquerors, where at first they reverenced, as though they were gods, the most noble of the old men, who were sitting in their curule chairs, and clothed with their insignia of magistrates; afterwards when they perceived them to be but men, they put them to death. The rest of the youth fled with Manlius into the Capitol, where they were besieged, but liberated by the valour of Camillus, who, being appointed Dictator in his absence, collected the citizens that still remained and overpowered the Gauls by an unexpected attack.

ANCIENT HISTORY.

FRIDAY, SEPTEMBER 16TH:—AFTERNOON, 2 TO 5.

Examiner,.....REV. GEORGE CORNISH, LL.D.

1. Give the dates in Jewish history of (*a*) the Exodus; (*b*) the reign of Saul; (*c*) the Revolt of the Ten Tribes; (*d*) the Babylonian Captivity. Name the most prominent kings of Judah

2. Enumerate the nations that successively in ancient times held the supremacy, previous to the time of Cyrus the Elder.

3. Give the geographical position of ancient Media, Armenia, Parthia, Syria, Chersonesus (1) Taurica, (2) Thracica, and (3) Cimbrica, with modern names where you can.

4. Trace the leading events in the formation of the Empire, which in the reign of Darius, son of Hystaspes, threatened the independence of Greece.

5. Give the geographical limits and divisions, (1) of Greece Proper; (2) of Greek Colonization.

6. Give an account of the expedition of the Ten Thousand. What were the important events that arose out of it?

7. (*a*) Trace briefly the growth of the leading Grecian States, naming those that in succession held the hegemony of Greece. (*b*) What events and causes led to the establishment and overthrow of the supremacy of Athens?

8. Trace the most important political events and constitutional changes at Rome, with dates, from the period of the expulsion of the Kings down to the Punic wars.

9. Give an account of the constitutional changes effected by the reforms of C. Gracchus, and point out what was their general object.

10. What were the real grounds and the alleged pretexts, on the part of Rome and Carthage, severally, for beginning the Second Punic War?

FRENCH.

TUESDAY, SEPT. 20TH:—MORNING, 9 TO 12.

Examiner, ... P. J. DAREY, LL.D.

1. Translate into English:—

Henriette. Hé doucement, ma sœur. Où donc est la morale
Qui sait si bien régir la partie animale,
Et retenir la bride aux efforts du courroux. (1)
Armande. Mais vous qui m'en (2) parlez, où (3) la pratiquez-vous?
De répondre à l'amour que l'on vous fait paraître
Sans le congé (4) de ceux qui vous ont donné l'être?
Sachez que le devoir vous soumet à leurs lois,
Qu'il ne vous est permis d'aimer que par leur choix;
Qu'ils ont sur votre cœur l'autorité suprême,
Et qu'il est criminel d'en disposer vous même.
Henriette. Je rends grâce aux bontés que vous me faites voir
De m'enseigner si bien les choses du devoir,
Mon cœur sur vos leçons veut régler sa conduite;
Et, pour vous faire voir, ma sœur, que j'en profite,
Clitandre prenez soin d'appuyer votre amour
De l'agrément de ceux dont j'ai reçu le jour.
Faites-vous sur mes vœux un pouvoir légitime,
Et me donnez (5) moyen de vous aimer sans crime.
Clitandre. J'y vais de tous mes soins travailler hautement;
Et j'attendais de vous ce doux consentement.

MOLIÈRE, *Les Femmes savantes*, *Ac. I, Sc. II.*

II. (1) What word is almost synonimous of *courroux?* What is the difference between the two?

(2) To what does *en* refer?

(3) For what word is *où* used?

(4) What other word would be usually used ?

(5) Why is in *faites-vous* the pronoun subject is after the verb and in *me donnez* it is before ? Give the rule.

III. Give the résumé of the first act of *Britannicus.*

IV. Write correctly :

Il faut que je fais mon devoir. Croyez-vous qu'il pleut ? Nous avons faits relier les livres que nous avons reçu. Le peu d'attention qu'il a faite à ses leçons a été la cause qu'il a échoué à ses examens. Les efforts que m'a coûté ce travail ont été considérables. Les frais que ce procès m'a coûtés ne se sont pas élevé à mil francs.

V. Say all you know about the Cardinal de Retz, as a writer, a politician and a churchman.

Name three female writers in the XVII century, and say in what kind of writings they distinguished themselves.

What do you know about the Satire Ménippée ?

VI. Translate into French :

When he had spoken, he looked round him with a placid air, and enjoyed the consciousness of his own beneficence. "Sir," said the prince with great modesty, "as I, like all the rest of mankind, am desirous of felicity, my closest attention has been fixed upon your discourse ; I doubt not the truth of a position which a man so learned has so confidently advanced :—let me only know what it is to live according to nature.

RASSELAS.

ENGLISH LITERATURE.

Spalding (*in part*) : Milton, *Paradise Lost, bks. I and II.*

MONDAY, SEPT. 19TH :—MORNING, 9 TO 1.

Examiner,.....CHAS. E. MOYSE, B.A.

1. What is meant by saying that the English Drama is Irregular ?

2. How are Jonson's plays criticized ?

3. Give some idea of the story of the First Book of the Fairie Queene.

4. What are the chief works of the brothers Fletcher, and what is their nature ?

5. Mention the leading Divines who wrote during the Age of the Restoration and Revolution, and briefly characterize their style.

6. After the name of each of the following authors, write the name of one of his works: Gay, Somerville, Blackmore, Berkeley, Arbuthnot Bishop Butler, Jonathan Edwards, Hooke, Young, Akenside.

7. Mention the leading Historians of the Eighteenth century, and notice the criticism about them.

8. Indicate the general character of the literature of the present century.

9. Mention Scott's longer poems, and point out their characteristics.

10. Contrast Thackeray and Dickens. Allude to Carlyle's style and general tendencies.

11. Mention sources from which Milton is said to have derived the idea of Paradise Lost.

2. Refer the following extracts to the poem:

(*a*) and of itself the water flies
All taste of living wight, as once it fled
The lip of Tantalus,

(*b*) to be weak is miserable,
Doing or suffering:

(*c*) where I shall reign
At thy right hand voluptuous.

(*d*) the sudden blaze
Far round illumined Hell,

(*e*) though his tongue
Dropt manna, and could make the worse appear
The better reason,

(*f*) then wander forth the sons
Of Belial, flown with insolence and wine.

(*g*) for even in Heaven his looks and thoughts
Were always downward bent.

13. Give the argument of the Second Book.

14. Quote from the First Book two passages of dissimilar nature which you think especially fine.

15. What general principle will help to explain the difference between our use of words and Milton's? Illustrate, and say precisely from what portions of the poem your illustrations are taken.

ENGLISH LITERATURE.

Shakspeare, *Tempest*: Trench, *Study of Words*.

MONDAY, SEPTEMBER 19TH:—AFTERNOON 2.30 TO 5.30.

Examiners,..... { CHAS. E. MOYSE, B.A. / P. T. LAFLEUR, M.A.

[Write the answers to A and B on separate bundles of paper.]

(A)

1. Trace Gonzalo throughout the play, and make brief remarks upon his disposition, illustrating your answer by means of quotation.

2. Explain:—

(*a.*) In the dark *backward* and *abysm* of time.

(*b.*) .....sitting,
His arms *in this sad knot*.

(*c.*) Of *it* own kind, all *foison*-all abundance.

(*d.*) A kind of, not of the newest, poor-John.

(*e.*) How *lush* and *lusty* the grass looks.

(*f.*) And are upon the Mediterranean *flote*.

3 Give an account of the usurpation of Prospero's power and the ill-treatment he suffered. Quote at discretion.

4. Some commentators consider The Tempest to be a mask. Why? Give some objections to this theory.

(B)

(The questions are the same as those set for the Second Year Exhibitions.)

ENGLISH COMPOSITION.

TUESDAY, 20TH SEPTEMBER, 2 to 5.

Examiners,..... { CHAS. E. MOYSE, B.A. / PAUL T. LAFLEUR, M.A.

Write an essay on the following subjects:—

1. Republican Government.

2. A walk through the woods.

3. Novel-reading.

SCIENCE SCHOLARSHIPS.

BOTANY.

FRIDAY, SEPT. 16TH:—9 TO 12 A.M.

Examiner,.....D. P. PENHALLOW, B. Sc.

1. Explain the physical and chemical properties of protoplasm, and show what is essential to it as an organized, living substance.

2. Explain the relation which protoplasm bears to other parts of the organized structure.

3. Show what constitutes the unit of structure, and what parts enter into its composition; also their relative positions.

4. Give the chemical composition and characteristics of cellulose; show from what it is probably derived and to what other vegetable products it is allied.

5. Explain the nature and origin of vacuoles.

6. Give the principal forms of reserve material; their chemical composition and distribution in the plant.

7. If a point on the trunk of an exogenous tree be selected at a fixed height above the ground, will any change in this relations be noted at the end of ten years? If so, how has it been effected?

8. A strip of bark, two inches wide, is removed from the trunk of an exogenous tree, so as to girdle it. What results will follow, and how may possible injury be overcome? What law of growth is demonstrated?

9. In the month of June, a strip of bark is raised from one end, and a piece of metal foil inserted, the bark being bound down again in such a manner as to exclude all air. In September, an examination of the parts is made. What changes will be noted, and what laws of growth are proved?

BOTANY.

FRIDAY, SEPT. 16TH:—2 to 5 P.M.

Examiner,.....D. P. PENHALLOW, B. Sc.

1. Give the leading characteristics of the following families:—

Leguminosæ, Ursticaceæ, Malvaceæ; give their range of distribution; show for what they are chiefly useful, and, as far as possible, enumerate the principal Canadian species in each.

2. Give the characteristics of the Gymnosperms, and show what families represented in Canada, are of economic importance, and in what respects they are of value.

3. A growth of timber is to be cut. What considerations should determine the time of year and age of the trees at which this is done, to secure the greatest value?

4. Enumerate the families of Angiospermus plants which, in Canada, yield important timber.

5. Give the essential characters of the Compositæ and show what economic value the family possesses.

6. Explain the principal conditions favorable and adverse to the migration of plants.

Examination of plants Tuesday from 9-12 a.m.

CHEMISTRY.

TUESDAY, SEPTEMBER 20TH:—AFTERNOON, 2 TO 5.

Examiner,.....B. J. HARRINGTON, B.A., PH.D.

1. What metals are included in the Alkali Group, and what properties do they possess in common?

2. How is Mercury obtained from Cinanbar? What are the chemical properties of the metal? What the distinctive characters of Mercurous and Mercuric Chloride?

3. Name some of the principal mordants and explain their use in dyeing.

4. State what you know with regard to the preparation and properties of Carbonic Oxide.

5. What reaction takes place when Benzoic Acid is distilled with excess of Lime?

6. Explain the constitution and give the properties of Aniline.

7. How are Cyanogen and Cyanhydric Acid prepared?

8. What are the chief characteristics of the Vegetable Alkaloids?

9. What do you understand by Quantivalence and Equivalent Weights?

10. Give the formula of Aldehyde, Nitroglycerine, Potassium Permanganate, and Lead Acetate. Calculate the percentage composition of any two of these.

LOGIC.

MONDAY, SEPTEMBER 19TH:—MORNING, 9 TO 12.

Examiners,..... { REV. J. CLARK MURRAY, LL.D.
PAUL T. LAFLEUR, M.A.

1. Name, and explain briefly, the three parts of Logical Doctrine.

2. What is meant by the expressions Extension and Intension as applied to terms. Illustrate by example.

3. What is the Square of Opposition? Explain fully the nature of any one of the relations expressed by means of it.

4. State the difference between Mediate and Immediate Inference; explain what is meant by "Immediate Inference by added determinates," and give an example of it.

5. What are the three Primary Laws of Thought? Give also their symbolical representation.

6. Name the Moods of the Third Figure, and explain the significant letters in the names.

7. Test the validity of the following reasoning:—

(*a*) Elementary substances alone are metals. Iron is a metal; therefore, it is an elementary substance.

(*b*) The object of war is durable peace; therefore, soldiers are the best peacemakers.

(*c*) The several species of brutes being created to prey upon one another proves that the human species were created to prey upon them.

8. What is the Second Method of Induction? Give an example of its use.

9. What are the requirements of a philosophical language?

SECOND YEAR EXHIBITIONS.

GREEK.

THURSDAY, SEPT. 15TH:—MORNING, 9 TO 12.

Examiner,.....A. J. EATON M.A., PH. D.

1. Translate: Homer, Odyssey, VI. vss. 41–47: 289–307.

2. (*a*) Give the root, tense and formation, and the present indicative of the following verbs: *πέπταται, ἐπιδέδρομεν, διεπέφραδε, τεθαλνῖα,*

γέγωνε. (*b*) Write the Attic forms of :—Οὐλυμπόδε, αἰεί, ἔμμεναι, Ἦμαρ κούρῃ, ἐμέθεν, ἐμοῖο, ποτί, ἶμεν. ὅσσον.

3. (*a*) Account for the mood of ἐλθωμεν, ἔλπῃ, ἡγήσαιτο, κεκύθωσι, κηαι, ἰδέσθαι. (*b*) Also for the case of νόστοιο, κελεύθου, χρόνον, Ἀλκινόοιο, μεγάροιο.

4. Define accurately the meaning of :—δόμοι, αὐλή, μέγαρον, ἐσχάρη (vss. 303-305). Does there seem to be any distinction in meaning between δῶμα and δόμος? How does δόμοι differ in meaning form δόμος in Homer, and what Latin word has a similar use ?

5. (*a*) Scan, noting peculiarities of metre, the following lines: 45, 297, 300, 303.

6. Translate, Herodotus, Bk. III. chapts. 17, 18 and 53 (from ὦ παῖ through ἄλλοισι.)

7. (*a*) In chapt. 53, explain the form ἰῶ, and give the Attic forms of βούλεαι, σεωυτόν. (*b*) In the language of the Ionians, what three dialects must we distinguish ? Which of these appearsin Herodotus ? Enumerate some of the peculiarities of the dialect of Herodotus.

8. (*a*) Give an account, as narrated by Herodotus, of the three expeditions proposed by Cambyses in chapter 17. (*b*) By whom were the words in the third extract spoken, and under what circumstances ?

9. Translate, Demosthenes, Olynthiacs, II, §§ 9 and 10.

10. (*a*) Explain the mood of συστῇ, and with this use of the mood compare ἂν τύχῃ in the same extract. (*b*) Account for the case of πόλεμον, οἰκίας. (*c*) For what does ἐνι stand ? When does *anastrophe* take place ? Is this an instance ?

11. Translate, and comment upon any peculiarities of syntax:

(*α*) ἡμεῖς δ'οὐκ οἶδ' ὁντινά μοι δοκοῦμεν ἔχειν τρόπον πρὸς αὐτά.

(*β*) καὶ ὅλως ἄπιστον, οἶμαι, ταῖς πολιτείαις ἡ τυραννὶς, ἄλλως τεκὰν ὁμορον χώραν ἔχωσι.

(*γ*) τὸ γὰρ εὖ πράττειν παρὰ τὴν ἀξίαν ἀφορμὴ τοῦ κακῶς φρονεῖν τοῦς ἀνοήτους γίγνεται, ὁιόπερ πολλάκις δοκεῖ τὸ φυλάξαι τἀγαθὰ τοῦ κτήσασθαι γαλεπώτερον εἶναι.

12. (*a*) State accurately (or draw the coastline and mark) the geographical position of the following towns : Amphipolis, Acanthus, Torone, Olynthus, Potidaea, Methone, and Pydna. (*b*) Under wha circumstances were the First and Second Olynthiacs delivered?

LATIN.

THURSDAY, SEPT. 15TH:—AFTERNOON, 2 TO 5.

Examiner,.....A. J. EATON, M.A., PH.D.

1. Translate, Virgil, Georgics, Bk. II. (*a*) vss. 73—82: (*b*) 458—470.

2. (*a*) *Inserere, imponere:* what would be the usual or prose construction?

(*b*) What tense is *exit?* Explain.

(*c*) Where is *nôrint* made? Explain its form, tense and mood.

(*d*) What is the construction of *foribus superbis?*

3. Comment upon the following expressions:—*mane salutandum; Ephyrëia uera; vici lacus; frigida Tempe; Assyrio veneno; pulchra testudine.*

4. (*a*) What is the distinction in meaning (if any) between *nodus, gemma* and *germen?* Are *gemma* and *germen* etymologically connected? Give the formation of each. (*b*) Derive the word *Georgicon.* (*c*) What prompted Virgil to compose the 'Georgics'? What Greek model has he imitated?

5. Translate, Horace, Odes, Bk. III. (*a*) Ode V., vss. 18—40: (*b*) Ode XXIX. 41—48.

6. To whom were the words of ext. (*a*) ascribed by the poet? What is the subject of Ode V., and what circumstances suggested it?

7. What metre is employed in these stanzas? Write out the scheme of the metre and scan one stanza, marking the quantity of each syllable.

8. Give the derivation of *irritum, iners, pontifex, parricida, prudens, duello.*

9. Translate, Livy, Bk. XXII., Chapt. 18 (from *Fabius quoque* to the end).

10. (*a*) Explain the use of the subjunctives *superassent, praevenisset, confidat, censeret.* (*b*) Give principal parts of *ratus, elusit, desisse.* (*c*) Write in direct narration the passage commencing *ne censeret.*

11. Translate, Cicero, In Cæcilium:

Tu vero, Cæcili, quid potes? quo tempore aut qua in re non modo ceteris specimen aliquod dedisti, sed tute tui periculum fecisti? in mentem tibi non venit quid negotii sit causam publicam sustinere, vitam alterius totam explicare atque eam non modo in animis judicum, sed etiam in oculis conspectuque omnium exponere, sociorum salutem, commoda provinci-

arum, vim legum, gravitatem judiciorum defendere? cognosce ex me, quoniam hoc primum tempus discendi nactus es, quam multa esse oporteat in eo, qui alterum accuset: ex quibus si unum aliquod in te cognoveris ego iam tibi ipse istuc, quod expetis, mea voluntate concedam: primum integritatem atque innocentiam singularem; nihil est enim quod minus ferendum sit quam rationem ab altero vitæ reposcere eum, qui non possit suæ reddere.

12. This oration is called 'In Q. Cæcilium Divinatio:' define the term "Divinatio."

HISTORY, GRAMMAR AND COMPOSITION.

TUESDAY, SEPT. 20TH:—AFTERNOON, 2 TO 5.

Examiner,.....A. J. EATON, M.A., PH.D.

(A) 1. What laws or constitutional changes were introduced by Licinius Stolo, C. Gracchus, Lycurgus and Clisthenes?

2. State briefly what you know of Appius Claudius, Cæcus, Hamilcar Barca, Alcibiades.

3. Give the geographical position of, and state (with dates) what occurred at, Issus, Arginusæ, Numantia, Thapsus, Tarentum, Mantineia.

4. Give an account of the Sicilian expedition.

5. Explain the duties of a Dictator, Prætor, Tribunus, Consul.

(B) 1. (*a*) Explain the uses of the article in Herodotus which differ from the Attic. (*b*) Translate the following words: *manibus, canis, occidit, fugit, novi, regis.* (*c*) Explain the formation from the root, of the present and perfect stems of *gigno, nosco, tango.*

2. Translate into English and Latin the following sentences:
a) εἰ ἐπράσσει τοῦτο, καλῶς ἐχει. (*b*) εἰ ἐπρασσε τοῦτο, καλῶς ἂν εἶχεν.
c) ἐὰν πράσσῃ τοῦτο, καλῶς ἕξει. (*d*) εἰ πράσσοι τοῦτο, καλῶς ἂν ἔχοι.

3. (*a*) What is a final clause? What particles may introduce it in Greek and Latin? What mood is found after primary tenses in final clauses? What mood after secondary tenses? (*b*) What tenses are chiefly used in the Subjunctive mood in Greek, and in what do they differ?

4. ταῦτα βούλομαι. Show how these words would be quoted directly after ἔλεγεν, and also indirectly.

5. Define the terms, and illustrate, *compensative lengthening, contraction of vowels, synizesis, syncope, assimilation, crasis.*

6. 1. (*a*). Express the following dates according to our notation: a. d. IIV. Non. Sextiles, C. Terentio Varrone L. Aemelio Paullo II. cos.; a. d. VIII. Kal. Apr. Cn. Pompeio Magno M. Licinio Crasso cos.; prid. Id. Jan. A. U. C. CCCCXL. (6). Write the following in Latin: June 20th, B.C., 207; November 8th, B.C. 64.

(C). 1. Translate (at sight) :—

Illud vereor, ne ignorans verum iter gloriae, gloriosum putes, plus te unum posse, quam omnes, et metui a civibus tuis, quam diligi malis. Quod si ita putas, totam ignoras viam gloriae. Carum esse civem, bene de re publica mereri, laudari, coli, diligi, gloriosum est: metui vero, et in odio esse, invidiosum, detestabile, imbecillum, caducum. Quod videmus etiam in fabulis, ipsi illi, qui "*Oderint, dum metuant*," dixerit, perniciosum fuisse.

2. Translate into Latin :—

Romulus was a just King, and gentle to his people. In his wars he was very successful and enriched his people with the spoils of their enemies. At last, after he had reigned for nearly forty years, it chanced that one day he called his people together in the field of Mars; when, all on a sudden, there arose a dreadful storm, and all was dark as night, and the rain and thunder and lightening were so terrible that all the people fled from the field, and ran to their several homes. At last the storm was over, and they came back to the field of Mars, but Romulus was nowhere to be found.

3. Translate into Greek :—

(1) He told me that the boy was very nearly related to Socrates. (2) They accuse the judge himself of injustice. (3) If we had been wise, we should have formed an alliance with the Athenians. (4) It is the part of a sense lessman to hold cheap what is present, from the desire of what is absent. (5) Without you I should have perished for anything my other friends could have done to prevent it.

ORDINARY MATHEMATICS.

FRIDAY, SEPT. 16TH:—MORNING, 9 TO 12.

Examiner, ... ALEXANDER JOHNSON, LL.D.

1. If the external vertical angle of a triangle be bisected by a straight line which cuts the base, prove that the segments of the base thus made are in the same ratio as the sides of the triangle.

2. If two triangles have one angle in each equal, and the sides about the equal angles proportional, they are equiangular, and the equal angles are opposite the homologous sides.

3. To a given circle circumscribe a triangle which shall have two of its angle $30°$ and $60°$ respectively.

4. If from a point outside a circle a secant and a tangent to the circle be drawn, the rectangle under the whole secant and the external segment is equal to the square of the tangent.

5. Prove that $a^0 = 1$; $a^{-m} = \frac{1}{a^m}$.

6. Prove that a surd cannot equal the sum or difference of a rational quantity and a surd.

7. If $\frac{a}{b} = \frac{c}{d} = \frac{e}{f}$ prove $\frac{a}{b} = \frac{a^p + c^p + e^p}{b^p + d^p + f^p}$.

8. Solve the equations:

(1) $a + x + \sqrt{a^2 + b\,x\,x} = b$

(2) $\frac{x}{x+1} + \frac{x+1}{x} = \frac{13}{6}$

(3) $ax + by = p$: $by + cz = q$: $cz + ax = r$.

9. In any triangle $\sin \frac{1}{2} A = \frac{\sqrt{(s-b)(s-c)}}{bc}$

10. Prove $\sin A + \sin B = 2 \sin \frac{1}{2}(A + B) \cos \frac{1}{2}(A-B)$.

11. Find the sine, cosine and secant of the angle whose tangent $= \frac{1}{2}$.

12. Find the number of seconds in the radian.

GEOMETRY.

FRIDAY, SEPT. 16TH:—AFTERNOON, 2 TO 5.

Examiner,.....ALEXANDER JOHNSON, LL.D.

1. In a given triangle inscribe a parallelogram of given area not exceeding half the given triangle.

2. If D_1, D_2, D_3, D_4, denote the distances of the centre of the circumscribed circle of any triangle from the centres of the four circles touching the sides, prove

$$D_1^2 + D_2^2 + D_3^2 + D_4^2 = 12 R^2.$$

3. Given base, difference of sides, and difference of base angles of a triangle, construct the triangle.

4. Describe a circle touching a given straight line and two given circles.

5. If the bisectors of the base angles of a triangle be equal, the triangle is isosceles.

6. The reciprocals of lines in harmonical progression are in arithmetical progression.

7. The tangents at the angular points of any triangle inscribed in a circle intersect the opposite sides in three points which are in the same straight line.

8. If a variable circle touch two fixed circles, the chord of contact passes through their external centre of similitude when the contacts are of the same kind.

9. If a system of circles have a pole and polar in common, they shall have the same radical axis.

10. If a circle touch two given circles (the nature of the contacts being assigned) the polar of its centre, with respect to one of the given circles always touches a given circle.

THEORY OF EQUATIONS—ALGEBRA.

SATURDAY, SEPT. 17TH:—MORNING, 9 TO 12.

Examiners,.....ALEXANDER JOHNSON, LL.D.

1. If the roots of the equation

$$x^3 + px^2 + qx + r = 0$$

be, a, b, c, form the equations whose roots are $\frac{a}{b+c}$ $\frac{b}{c+a}$ $\frac{c}{a+b}$

2. Transform the equation $x^3 + qx + r = 0$ into another whose roots are the squares of the differences of the roots of the proposed equation.

3. An equation $f(x) = 0$ cannot have more positive roots than $f(x)$ has changes of sign and cannot have more negative roots than $f(-x)$ has changes of sign.

4. If each negative co-efficient in an equation be taken positively and divided by the sum of all the positive co-efficients which precede it, the greatest of all the fractions thus formed, increased by unity, is a superior limit to the positive roots.

5. Solve the equation $1 + x_5 = a\ (1 + x)^5$.

6. If $r^2 - p^2 s = 0$ the equation $x^4 + px^3 + qx^2 + rx + s = 0$ may be solved as a quadratic.

7. Investigate Cardan's solution of a cubic equation.

8. Prove the Binomial Theorem when the index is a positive fraction.

9. Find the number of triangles which can be formed by joining three angular points of a quindecagon.

10. Find for what values of m the expression

$$y_2 + 2xy + 2x + my - 3$$

will be capable of resolution into two rational factors.

ENGLISH LITERATURE.

Shakspeare, *As You Like It:* Trench, *Study of Words.*

MONDAY, SEPT 19TH:—AFTERNOON, 2 TO 5.

Examiner,..... .....CHAS. E. MOYSE, B.A.

1. Use your knowledge of the play to set forth.

(*a*) What passed between Duke Frederic, Rosalind and Celia when Rosalind was sentenced to banishment.

(*b*) Touchstone's use (*a*) of a knight that swore by his honour (*b*) court-manners (*c*) the cut of a courtier's beard.

2. Trace Orlando through the play.

3. Comment on peculiarities of construction, or meaning, or form in the following:

(*a*) Manage, (*b*) a many merry men, (*c*) I had as lief, (*d*) There comes an old man and his three sons, (*e*) Nor did not woe, (*f*) If he, compact of jars, grow musical, (*g*) a more sounder instance, (*h*) God make incision in thee, (*i*) the quintessence of every sprite, (*j*) an unquestionable spirit, (*k*) Sir Oliver Martext, the vicar, (*l*) something browner than Judas', (*m*) a puisny tilter, (*n*) Cæsar's thrasonical brag, (*o*) good wine needs no bush (*p*) complexions that liked me.

4. Scan, and comment on irregularities:—

(*a*) The flux of company; anon a careless herd.

(*b*) We'll have a swashing and a martial outside.

(*c*) But justly as you have exceeded all promise.

(*d*) The parts and graces of the wrestler.

(*e*) Like a ripe sister: the woman low.

(*f*) With observation, the which he sents.

(*g*) The melancholy Jaques grieves at that.

(*h*) And as mine eye doth his effigies witness.

5. What Greek word is very nearly the same as *transport*, and with what object are both mentioned? What does *Frank* mean? Give names derived from it. Make a note on Morimo, Rodomonte, Euxine, Irenaus.

6. Examine the words Drepanum, stellio, stellionatus, topaz, carbuncle, dactyle.

7. (*a*) "A parallel process of purifying and ennobling has also been going forward." Give examples of this elevation of words.

(*b*) "Names which throw a flimsy veil of sentiment over some sin." Illustrate.

(*c*) Point out stages in the meaning of *idiot*.

8. When Trench is speaking of linguistic researches with what science does he compare language?

Under the heads *Saxon* and *Norman* classify home, swine, pork, fowl, sheep, deer, venison, cow, pullet, veal. What ground is there for supposing that when the Indo-European race divided into groups it had not entered on the agricultural stage and had not begun to work metals?

9. Instance the derivation of names from popular characters in books.

10. In what terms does Trench speak of Cicero? Make notes on *labarum* and *paraffin*.

11. Distinguish between *apprehend* and *comprehend*. Indicate false etymologies of pavo, formica, mors and comment on the spelling *analize*.

FRENCH.

TUESDAY, SEPT. 20TH :—MORNING, 9 TO 12.

Examiner, ... P. J. DAREY, M.A., LL.D.

1. Translate :—

Le Loup et le Chien.

Un loup n'avait que les os et la peau,
Tant les chiens faisaient (1) bonne garde :
Ce loup rencontre un dogue aussi puissant que beau,
Gras, poli, (2) qui s'était fourvoyé par mégarde.
L'attaquer, le mettre en quartiers,
Sire loup l'eût fait (3) volontiers,
Mais il fallait (4) livrer bataille,
Et le mâtin était de taille
A se défendre hardiment.
Le loup donc l'aborde humblement,
Entre en propos, et lui fait compliment
Sur son embonpoint qu'il admire.
Il ne tiendra qu'à (5) vous beau sire
D'être aussi gras que moi, lui répondit le chien.
Quittez les bois, vous ferez bien :
Vos pareils y sont misérables,
Cancres, hères et pauvres diables,
Dont la condition est de mourir de faim.
Car, quoi ! rien d'assuré ! point de franche lippée !
Tout à la pointe de l'épée !
Suivez-moi, vous aurez un bien meilleur destin.

LA FONTAINE, *Livre I, Fable V.*

II 1. Write in full all the simple tenses of that verb.

2. How do you form the feminine of *gras, poli?* According to what rules

3. What tense is *eût fait?*

4. What sort of verb is *fallait?* Translate into French :

He wants a book. A man must have friends ; and explain the french construction.

III. How do you call the expression : *il ne tiendra qu'*. Translate the sentences : *nous le tenons, tu y tiens, il ne tiendra pas à moi.*

IV. Give a résumé of the first act of the Bourgeois gentilhomme.

V. What remark do you make on verbs ending in *eler* and *eter*? Give examples.

VI. Write the Preterite Definite of *naître, vivre, résoudre, mettre, acquérir*

VII. Translate into French:

All those doors have bolts, keys and locks. The wainscot in those rooms is very fine. Such is life, some people are happy and others wretched. Many roofs in Montreal are covered with tin. Have you no friends in town? This country produces a great deal of fruit, apples, pears, plums, currants, and all sorts of grain. In winter the cold is very severe in Canada and it is very hot in summer.

CHEMISTRY.

Examiner,..... B. J. HARRINGTON, B.A., PH.D.

1. How much Sulphuric Acid (80 p.c. strength) can be made from 10 tons of Iron Pyrites (FeS_2)?

2. What acids are formed by the union of Phosphoric Anhydride and Water? Give their formulæ.

3. What reaction takes place when Silicon Fluoride is brought into contact with water?

4. How is Ether prepared? Give equations illustrating the chemical changes that take place.

5. Explain the relationship of Alcohol, Aldehyde and Acetic Acid. How may pure Acetic Acid be prepared

6. State what you know with regard to the chemical properties of Albumen.

7. What are the principal products of the destructive distillation of wood?

8. How is Marsh Gas prepared? What are its properties? What the general formula of the series to which it belongs?

9. Give a formula for each of the following compounds:—Formic Acid Nitrobenzol, Dextrin, Ethyl Mercaptan, Zinc Nitrate.

10. Give a sketch of the principal facts concerning the combination of gases by volume.

FIRST YEAR EXHIBITIONS.

GREEK.

THURSDAY, SEPT. 15TH:—MORNING, 9 TO 12.

Examiner,.....A. J. EATON, M. A., PH. D.

1. Translate: Homer, Iliad, Bk. VI:—

> Ὣς ἄρα φωνήσας ἀπέβη κορυθαίολος Ἕκτωρ.
> αἶψα δ' ἐπειθ' ἵκανε δόμους εὐναιετάοντας,
> οὐδ' εὗρ' Ἀνδρομάχην λευκώλενον ἐν μεγάροισιν,
> ἀλλ' ἥγε ξὺν παιδὶ καὶ ἀμφιπόλῳ ἐυπέπλῳ
> πύργῳ ἐφεστήκει γοόωσά τε μυρομένη τε.
> Ἕκτωρ δ' ὡς οὐκ ἔνδον ἀμύμονα τέτμεν ἀκοιτιν,
> ἐστη ἐπ' οὐδὸν ἰὼν, μετὰ δὲ δμωῇσιν ἔειπεν·
> „εἰ δ' ἄγε μοι, δμωαί, νημερτέα μυθήσασθε.
> πῇ ἔβη Ἀνδρομάχη λευκώλενος ἐκ μεγάροιο;
> ἠέ πῃ ἐς γαλόων ἢ εἰνατέρων ἐυπέπλων,
> ἢ ἐς Ἀθηναίης ἐξοίχεται, ἔνθα περ ἄλλαι
> Τρωαὶ ἐυπλόκαμοι δεινὴν θεὸν ἱλάσκονται;“
> τὸν δ' αὖτ' ὀτρηρὴ ταμίη πρὸς μῦθον ἔειπεν·
> Ἕκτορ, ἐπεὶ μάλ' ἄνωγας ἀληθέα μυθήσασθαι,
> οὔτε πῃ ἐς γαλόων οὔτ' εἰνατέρων ἐυπέπλων,
> οὔτ' ἐς Ἀθηναίης ἐξοίχεται, ἔνθα περ ἄλλαι
> Τρωαὶ ἐυπλόκαμοι δεινὴν θεὸν ἱλάσκονται,
> ἀλλ' ἐπὶ πύργον ἔβη μέγαν Ἰλίου, οὕνεκ' ἄκουσεν
> τείρεσθαι Τρῶας, μέγα δὲ κράτος εἶναι Ἀχαιῶν.
> ἡ μὲν δὴ πρὸς τεῖχος ἐπειγομένη ἀφικάνει,
> μαινομένῃ ἐικυῖα. φέρει δ' ἅμα παῖδα τιθήνη.“

[Bk. XXII, vss. 90-97 and 437-448, may be subtituted for the above].

2. (*a*) Write out the Attic forms of any four of these words: *μένησι, μιν, πυλάων, ἔειπεν, μεγάροιο, ἐὺ, γοόωσα.* (*b*) Give the root, tense and formation of any five of the following verbs: *βεβρωκώς, δέδορκεν, πέπυστο, κέκλετο, τέτμεν, ἄνωγας, ἀπέβη.*

3. Give the meaning and derivation: *ἱππόδαμος, τρίποδα, γλαυκῶπις, μενεπτόλεμος, τηλεκλειτοί, ἄμβατος, ἄσβεστον.*

4. Scan the first four lines.

5. (*a*) In the Homeric dialect what relation do—*θι*,—*θεν*,—*θε* and —*φι* (*ν*) mark as special case-endings? (*b*) What is the common ending of the dat. plur. of the first declension, in Homer?

6. Translate: Xenophon, Anabasis, Bk. I.:

Κῦρος δὲ συγκαλέσας τοὺς στρατηγοὺς εἶπεν, 'Απολελοίπασιν ἡμᾶς Ξενίας καὶ Πασίων. ἀλλ' εὖ γε μέντοι ἐπιστάσθωσαν ὅτι οὔτε ἀποδεδράκασιν· οἶδα γὰρ ὅπῃ οἴχονται· οὔτε ἀποπεφεύγασιν· ἔχω γὰρ τριήρεις ὥστε ἑλεῖν τὰ ἐκείνων πλοῖον· ἀλλὰ μὰ τοὺς θεοὺς οὐκ ἐγωγε αὐτοὺς διώξω, οὐδ' ἐρεῖ οὐδεις, ὡς ἐγὼ ἕως μὲν ἂν παρῇ τις χρῶμαι, ἐπειδὰν δὲ ἀπιέναι βούληται, συλλαβὼν καὶ αὐτοὺς κακῶς ποιῶ καὶ τὰ χρήματα ἀποσυλῶ. ἀλλὰ ἰόντων, εἰδότες ὅτι κακίους εἰσὶ περὶ ἡμᾶς ἢ ἡμεῖς περὶ ἐκείνους. καίτοι ἔχω γε αὐτῶν καὶ τέκνα καὶ γυναῖκας ἐν Τράλλεσι φρουρούμενα· ἀλλ' οὐδὲ τούτων στερήσονται, ἀλλ' ἀπολήψονται τῆς πρόσθεν ἕνεκα περὶ ἐμὲ ἀρετῆς.

LATIN.

THURSDAY, SEPT. 15TH:—AFTERNOON, 2 TO 5.

Examiner,.....A. J. EATON, M.A., PH.D.

1. Translate, Horace. Odes, Bk. I.:—

Dicam et Alciden, puerosque Ledæ,
Hunc equis, illum superare pugnis
Nobilem; quorum simul alba nautis
Stella refulsit,

Defluit saxis agitatus humor,
Concidunt venti, fugiuntque nubes,
Et minax—quod sic voluere—ponto
Unda recumbit.

Romulum post hos prius, an quietum
Pompili regnum memorem, an superbos
Tarquini fasces, dubito, an Catonis
Nobile letum.

Regulum, et Scauros, animaeque magnae
Prodigum Paullum, superante Pœno,
Gratus insigni referam Camena,
Fabriciumque.

2. Write brief explanatory notes upon the various names mentioned in the above: *Alciden, pueros Ledae, Romulum,* etc.

3. (*a*) Account for the case in the following: *pugnis, ponto, nautis, saxis.* (*b*) Principal parts of: *refulsit, fugiunt, recumbit, referam.*

4. (*a*) Write the scheme of the metre of which the above strophes are examples, and give the terms applied to such metres. (*b*) When did Horace live? Name some contemporary writers. What are the main elements of Horace's popularity?

5. Translate, Virgil, Æneid, Bk. I.:—

Obstupuit primo aspectu Sidonia Dido,
Casu deinde viri tanto; et sic ore locuta est:
"Quis te, nate dea, per tanta pericula casus
Insequitur? quæ vis immanibus applicat oris?
Tune ille Æneas, quem Dardanio Anchisæ
Alma Venus Phrygii genuit Simoëntis ad undam?
Atque equidem Teucrum memini Sidona venire,
Finibus expulsum patriis, nova regna petentem
Auxilio Beli: genitor tum Belus opimam
Vastabat Cyprum, et victor ditione tenebat:
Tempore jam ex illo casus mihi cognitus urbis
Trojanæ, nomenque tuum, regesque Pelasgi.
Ipse hostis Teucros insigni laude ferebat,
Seque ortum antiqua Teucrorum ab stirpe volebat.
Quare agite, o tectis, juvenes, succedite nostris.
Me quoque per multos similis fortuna labores
Jactatam hac demum voluit consistere terra.
Non ignara mali miseris succurrere disco."

6. Explain the following epithets: *Sidonia, Dardanio, Cytherea, cana* Fides, *pius* Æneas, *Cerealia* arma, *Cyclopia* saxa, *Mavortia* moenia.

7. Explain grammatically *aspectu, Teucrum, Sidona, ortum, nostris ignara mali;* Parce *metu,* Cytherea; nuda *genu;* neque cernitur *ulli.*

8. (*a*) Remark generally upon the metre of the Æneid. (*b*) Write out the first two lines, dividing them into feet, marking the quantity of every syllable, the ictus of every foot, and the principal cæsura of each verse.

9. Translate, Cæsar, Bellum Britannicum:

His constitutis rebus, nactus idoneam ad navigandum tempestatem tertia fere vigilia solvit, equitesque in ulteriorem portum progredi et naves conscendere et se sequi jussit. A quibus cum paullo tardius esset administratum, ipse hora circiter diei quarta cum primis navibus Britanniam

attigit, atque ibi in omnibus collibus expositas hostium copias armatas conspexit. Cujus loci haec erat natura, atque ita montibus angustis mare continebatur, uti ex locis superioribus in litus telum adigi posset. Hunc ad egrediendum nequaquam idoneum locum arbitratus, dum reliquae naves eo convenirent, ad horam nonam in ancoris exspectavit.

Interim, legatis tribunisque militum convocatis, et quæ ex Voluseno cognosset et quæ fieri vellet ostendit, monuitque ut rei militaris ratio, maxime ut maritumæ res postularent (ut quae celerem atque instabilem motum haberent), ad nutum et ad tempus omnes res ab iis administrarentur.

10. State clearly the principles of syntax that explain the mood and tense: *esset administratum; posset; convenirent; cognosset; vellet: postularent; administrarentur.*

GRAMMAR AND COMPOSITION.

TUESDAY, SEPT. 20TH :—AFTERNOON, 2 TO 5.

Examiner, ... A. J. EATON, M.A., PH.D.

1. (*a*) In Greek what are the three groups of dialects? In which of these dialects did Homer, Xenophon and Demosthenes write?

2. (*a*) Give a table of the mutes in their several classes and orders. (*b*) What consonants may stand at the end of a Greek word?

3. Decline *χώρᾱ*, *γλῶσσα* and *ἀνήρ*, accenting with care.

4. Inflect *εἶμι* and *εἰμί* in the present indicative; and *νικάω* in present optative middle.

5. (*a*) What are the rules for the contraction of simple vowels? Contract the following vowel combinations: *γένε-ι*, *πειθό-ι*, *ἐ-ύ*, *αἰδό-α*, *ὁρά-ομεν*, *γένε-ε*, *φίλε-ε* (carefully marking the accent). (*b*) Explain the euphonic changes which occur in the following words: *λέλειμμαι* (*λειπ-*), *σώμασι* (*σωματ-*), *ἐτέθην* (*θε-*).

6. What is a cognate accusative? Give an example and translate it.

7. Translate into Greek: (*a*) I admire your virtue and that of your friend. (*b*) Cyrus marches against the king of the Persians. (*c*) Philip was their general, with two others. (*d*) If any one was to do thus, he would do the greatest injury to the state.

8. (*a*) Of what three parts are all Latin verb-forms made up? Divide *vocavit* and *vocabam* into these three parts. (*b*) What is the root, present and perfect stems of *vocare, monere, fugere, tangere.*

9. (*a*) Write three Latin words and syllabicate each. (*b*) What is meant by a vowel being short by nature, or long by position? (*c*) What is the dative plural of *filia*; vocative of *Horatius*; genitive of *ingenium*; nominative plural of *locus.*

10. How do adjectives in *-er* form their comparatives? In how many ways may you translate *audacior* or *audacissimus?* Compare *maledicus idoneus, dexter.*

11. (*a*) Write the Latin for: *at home, on the ground, at Athens, at Carthage, he went to Rome, he came from Rome.*

(*b*) State clearly the principles of syntax that explain the following constructions: nihil erat *reliqui*; vir *summae virtutis*; laudator *emporis acti*; Cæsar *a Bruto* interfectus est; laudatur *ab illis.*

12. Translate into Latin:—

(A) (1) The Gauls were conquered by Cæsar before the end of the summer. (2) The father sent his son to Rome to be educated. (3) I am afraid he will come. (4) The consuls being slain, the three armies obeyed Octavius alone. (5) The Samnites sent the Roman army under the yoke.

(B) After this king Porsenna made war against the Latins, and his army was beaten and fled to Rome; and the Romans received them kindly, and took care of those who were wounded, and sent them back safe to king Porsenna. For this the king gave back to the Romans all the rest of their hostages whom he had still with him, and also the land which they had won from the Veientians. So Tarquinius, seeing that there was no more hope of aid from king Porsenna, left Clusium and went to Tusculum of the Latins.

EUCLID.

FRIDAY, SEPT. 16TH:—MORNING, 9 TO 12.

Examiner, ... ALEXANDER JOHNSON, LL.D.

1. Given one side of a rectangle, construct the rectangle so that the area shall be equal to that of a given triangle.

2. The enunciation of a Prop. in Bk. II. may be put in the following form:—"The sum of the squares of two straight lines exceeds the square of the difference of the lines by twice the rectangle under them;" give the ordinary form and prove the Prop.

1. Define what is meant by "a point *within* a circle," "a straight line falling *within* a circle." Prove that the straight line joining two points on the circumference must fall within the circle.

4. On a given straight line construct a segment of a circle containing half a right angle.

a. If the straight line be 2 feet long, find the length of the radius.

5. In a given circle inscribe a regular pentagon.

6. In a given circle inscribe a regular quindecagon.

*7. Equiangular triangles have the sides about the equal angles proportional, and the sides opposite the equal angles are homologous. Define "homologous."

*8. Find a *mean* proportional between two given straight lines.

* *Extra questions.*

ALGEBRA—ARITHMETIC.

FRIDAY, SEPT. 16TH:—AFTERNOON, 2 TO 5.

Examiner,.....ALEXANDER JOHNSON, LL.D.

1. The sum n terms of the series 2, 5, 8. is 950; find n.

2. Insert 4 geometric means between 160 and 5.

3. Show that a recurring decimal may be regarded as an infinite number of terms in geometrical progression, and hence find the value of .4$\dot{2}\dot{3}$.

4. Find the *harmonic mean* between a and b.

5. Solve the following equations:—

(1) $\dfrac{2}{x+\sqrt{2-x^2}}+\dfrac{2}{x-\sqrt{2-x^2}}=x$

(2) $\dfrac{2x+9}{9}+\dfrac{4x-3}{4x+3}=3+\dfrac{3x-16}{18}$

(3) $x+y=a;\ x^2+y^2=b^2$

(4) $y+z=a;\ z+x=b;\ x+y=c;$

(5) $\dfrac{132x+1}{3x+1}+\dfrac{8x+5}{x-1}=52$

6. Prove that the product of two dissimilar surds cannot be rational.

7. The length of a floor exceeds its breadth by 4 ft.; if each had been increased by a foot, the area of the room would have been increased by 27 sq. feet; find its original dimensions.

8. Find the continued product of

$$3\sqrt{8},\ 2\sqrt[3]{6} \text{ and } 3\sqrt[4]{54}.$$

9. Find in how many years a sum of money at 5 per cent. interest will double itself.

10. Find a mean proportional between ·006 and 1·03.

ENGLISH LITERATURE.

SHAKESPEARE: CORIOLANUS.

TUESDAY, SEPT 10TH:—MORNING, 9 TO 11.

Examiner,.....CHAS. E. MOYSE, B.A.

1. From what source did Shakspeare derive the story of Coriolanus? When are the events described in the play said to have happened? Indicate the situation of Corioli.

2. Use your knowledge of the play to set forth,

(*a*) What took place and what was said when Coriolanus visited the house of Aufidius.

(*b*) The tenor of Volumnia's appeal to Coriolanus.

3. Give with care the meaning of the following extracts:

(*a*) The leanness that afflicts us, the object of our misery, is as an inventory to particularize their abundance.

(*b*) He hath faults, with surplus, to live in repetition.

(*c*) Still cupboarding the viand, never bearing
Like labour with the rest, where the other instruments
Did see and hear, devise, instruct, walk, feel
And mutually participate, did minister
Unto the appetite.

(*d*) The mutinous parts
That envied his receipt.

(*e*) To make him worthy whose offence subdues him
And curse that justice did it.

(*f*) Then shall we ha' means to vent
Our musty superfluity.

(*fi*) I mean to stride your steed and at all times
To undercrest your good addition.
To the fairness of my power.

(*h*) I would not been so fidiused for all the chests in Corioli.

(*i*) Ridges horsed
With variable complexions.

(*j*) He lurched all swords of the garland.

(*k*) You are plebeians
If they be senators ; and they are no less
When, both your voices blended, the great'st taste
Most palates theirs.

(*l*) He scotched nim and notched him like a carbonado.

(*m*) Nay, sometimes
Like to a bowl upon a subtle ground
I have tumbled past the throw ; and in his praise
Have almost stamp'd the leasing.

(*n*) A Jack guardant cannot office me from my son Coriolanus.

4. Refer as many of the above extracts as you can to occasion and speaker.

5. Comment on the syntax of the following :—

(*a*) Shall's to the Capitol ? (*b*) Even in theirs and in the commons, ears. (*c*) He did it to please his mother and to be partly proud. (*d*) We should by this, to all our lamentation, If he had gone forth consul, found it so. (*e*) Have we not had a taste, of his obedience ? Our ædiles smote ? (*f*) More worthier than their voices.

6. Instance from the play, meanings of prepositions which have fallen into disuse. Notice general features distinguishing Elizabethan from Victoria, English.

7. Scan the following lines and make notes on peculiarities :

(*a*) The plebleians have got your fellow-tribune.

(*b*) Shall fly out of itself nor sleep, nor sanctuary.

(*c*) Like one that means his people's harm in manacles.

(*d*) No impediment between but that you must.

(*e*) Or seeing it of such childish friendliness.

(*f*) As the dead carcasses of unburied men.

(*g*) Shouting their emulation. What is granted them ?

(*h*) You, the great toe of this assembly.

(To whom is reference made and how is the metaphor defended ?)

(*i*) But they did say their prayers and addressed them.

(*j*) And power, unto itself most commendable.

(*k*) It is the humane way, the other course.

8. What is meant by *unstopt* and *end-stopt* lines ? by masculine and feminine rimes ?

ENGLISH GRAMMAR.

FIRST YEAR.

MONDAY, SEPTEMBER 19TH :—9 TO 12.

Examiners, ... { CHAS. E. MOYSE, B.A. / PAUL T. LAFLEUR, M.A.

1. Why is the Article regarded as an Adjective ?

2. Define and illustrate :—Impersonal Verb, Relative Adverb, Nominatives, Absolute, Auxiliary Verb, Predicate.

3. What are the various uses of the word "it?" Illustrate by example.

4. Give a complete list of the Indefinite Pronouns.

5. How is the Present (or Imperfect) Participle distinguished from the Gerund? Explain fully, and give examples.

6. Write out the scheme of tenses in the active voice and apply the scheme to the verb "shake," giving the first person singular of each tense.

7. What is the "Attributive Relation? How many kinds of Attributive Adjuncts are said to be possible ?

8. Explain the function of the Preposition, and state what classification is made of the various kinds.

9. Analyse fully the following :—

(*a*) The report was spread in the town that nothing would be known before nightfall.

(*b*) If ii were possible to take another view of the case, I should be willing to do so, but you are clearly in the wrong,

(*c*) .....The grove receives us next,
Between the upright shafts of whose tall elms
We may discern the thresher at his task.

SECOND YEAR.

(N.B.—Candidates will answer questions 2, 3, 5, 7, 8 and 9, together with the following.)

10. What are the uses of the Subjunctive mood in modern English? Give examples. State also a use of it, formerly common, now obsolete.

11. Shew by means of four examples that words derived directly from Latin undergo less change than those which have been brought in through French.

12. Give examples of words derived from

(*a*) Celtic.

(*b*) Latin before the Saxan invasion.

(*c*) Norman French.

13. Give the derivation and history of: currant, urbanity, romance, rival, lord, paper.

ENGLISH COMPOSITION

MONDAY, 19TH SEPTEMBER, 2 to 4.

Examiners,..... } CHAS. E. MOYSE B.A.
} PAUL T. LAFLEUR, M.A.

Write an essay on one of the following subjects :—

1. The Canadian Pacific Railway.

2. Holidays and how to spend them.

3. A favorite author.

Faculty of Applied Science.

FACULTY OF APPLIED SCIENCE

EXAMINATION FOR SCOTT EXHIBITION.

ENGLISH HISTORY AND LITERATURE.

TUESDAY, SEPT. 21ST :—AFTERNOON, 2 TO 5.

Examiners,..... { CHAS. E. MOYSE, B.A.
PAUL T. LAFLEUR, M.A.

(Write your answers to A. and B. on separate bundles of paper.)

SECOND AND THIRD YEARS.

(A.)

Macaulay, History of England Vol. I. cap. I.

1. "In the year 1603 the great Queen died. It was then that both Scotland and Ireland became parts of the same empire with England." Write the substance of Macaulay's sketch of the previous history of Ireland and Scotland and of the contrasts they exhibited.

2. Give an account of the character of the Cavaliers and Puritans and notice the arguments which either of those two parties might have used to justify its appeal to arms.

SECOND YEAR.

(B.)

3. Describe the shipwreck, as related by Miranda and Ariel, using quotations where you think fit.

4. What is your opinion of the character of Miranda? Support it by reference to the play.

5. Where does each of the following quotations occur, and by whom is it spoken?

Now would I give a thousand furlongs of sea for an acre of barren ground.
Go make thyself like a *nymph* of the sea
Sometime like apes that *mow* and chatter at me
Mars's *hot minion* is return'd again.
Now my charms are all o'er thrown.

6. Make brief explanatory notes on the italicised words in the last question, and on the following;—green sour ringlets, weather-fends, erkin, windring brooks, stover, viands.

THIRD YEAR.

(B.)

7. Give an account of the preparation of the Fiery Cross, and indicate the nature of the curse pronounced on the disobedient clansman.

8. Quote some ten or twelve consecutive lines which seem to you to shew poetic merits, and give reasons for your choice.

9. What name is given to the opening stanza of each canto? What is the origin of the name? Explain the structure of the stanza.

10. Who were Blanche, Ellen, John of Brent, Graem?

11. Explain the following words:—kerne, coif-clad, chaplet, pibroch, shallop, matins, proselyte, batten, ruthless.

12. From what passages in the poem do we obtain definite ideas of domestic life among the Highlanders?

SCOTT EXHIBITION.

MATHEMATICS.

FRIDAY, SEPTEMBER 16TH, MORNING, 9 TO 12.

Examiner,..... .....G. H. CHANDLER, M.A.

1. Find the equation of the circle which passes through the origin and through the points (1, 2) and (1,—2). Determine the centre and radius of the circle, and show that $(\frac{1}{2}, \frac{3}{2})$ is a point on it.

2. Show that the locus of a point which is such that the sum of the squares of its distances from the angular points of a given triangle is constant, is a circle having its centre at the centre of gravity of the triangle.

3. A normal of the parabola $y^2 = 2mx$ passes through the extremity of the latus rectum; find the co-ordinates of the other extremity and the length of normal inside the curve.

4. Show that the normal at any point of an ellipse bisects the angle between the focal distances of the point.

5. Show that

(1) $d\left(\frac{x^2 - 2a^2}{x - a}\right) = dx + \frac{a^2\,dx}{(x - a)^2}$,

(2) $d \log \left(\frac{x}{\sqrt{1 + x^2}}\right) = \frac{dx}{x\,(1 + x^2)}$,

(3) $d\,x^x = x^x\,(1 + \log x)\,dx$,

(4) $d \log \tan \left(\frac{\pi}{4} + \frac{x}{2}\right) = \frac{dx}{\cos x}$

6. Given the perimeter of a sector of a circle, show that the area will be greatest when the arc is twice the radius.

7. Show that $\log (1 + e^x) = \log 2 + \frac{x}{2} + \frac{x^2}{8}$, &c.

8. Show that the radius of curvature at any point of the curve

$$\sqrt{x} + \sqrt{y} = \sqrt{a} \text{ is } \frac{2(x + y)^{\frac{3}{2}}}{\sqrt{a}}.$$

9. Integrate $\frac{dx}{2 + 5x^2}$, $\frac{dx}{x \log x}$, $\frac{x^2\,dx}{x^6 + 1}$, $\frac{(1 + x)^2}{x - x^2}dx$.

10. Find the area included between the curve

$a^2\,y = x^2\,(a + x)$ and the axis of x.

SCOTT EXHIBITION.

MATHEMATICS.

TUESDAY, SEPT. 20TH:—MORNING, 9 TO 12.

Examiner,.....G. H. CHANDLER, M.A.

1. Divide a straight line into two parts, so that the square on one part may be twice the square on the other part.

2. In a given circle inscribe a triangle whose angles shall be as the numbers 2, 5, 8.

3. In any right-angled triangle, any rectilineal figure described on the hypotenuse is equal to the sum of the similar and similarly described figures on the sides.

4. From a given point outside a given plane draw a perpendicular to the plane.

5. Divide $2\sqrt{3} + 3\sqrt[3]{2} + \sqrt[4]{30}$ by $3\sqrt{2}$.

6. Find x and y from the equations

$$\left.\begin{aligned} \sqrt{x} + \sqrt{y} &= 3 \\ x^{\frac{3}{2}} + y^{\frac{3}{2}} &= 9 \end{aligned}\right\}$$

7. A triangular piece of ground having 180 ft., 240 ft., and 300 ft., for its sides is to have a path of uniform width cut round it; what will be the width of the path if it contain one-tenth of the area of the ground?

8. In any triangle

$$\tan A + \tan B + \tan C = \tan A \tan B \tan C,$$

$$\cos^2\frac{A}{2} + \cos^2\frac{B}{2} + \cos^2\frac{C}{2} = 2 + 2\sin\frac{A}{2}\sin\frac{B}{2}\sin\frac{C}{2}.$$

9. Find the formulæ for the radii of the inscribed, circumscribed and escribed circles of a triangle.

10. The hypotenuse c of a right-angled triangle ABC is trisected in D and E; show that the sum of the squares of the sides of the triangle CDE is $\frac{5}{9}c^2$.

BURLAND PRIZE.

(Open to Students entering the Second Year.)

ELEMENTS OF ORGANIC CHEMISTRY.

TUESDAY, OCT. 11TH:—AFTERNOON, 2 TO 5.

Examiner,.....B. J. HARRINGTON, B. A., PH.D.

1. Explain the relation of Chloral to Aldehyde.

2. State what you know with regard to the preparation, properties and constitution of Picric Acid.

3. What do you understand by a diatomic Alcohol?

4. Distinguish between true and compound Ethers.

5. What is an Amine? What an Amide? Give examples.

6. Distinguish between fractional distillation and fractional condensation.

7. How is Oxalic Acid prepared? What are its properties? What takes place when it is heated with strong Sulphuric Acid?

8. What are the properties of Cellulose? How may it be converted into Pyroxylin?

9. How is Napthalin obtained? What are its properties? Give its formula.

10. Give constitutional formulæ for Alcohol, Ethyl Mercaptan, Acetic Acid, Nitrobenzol.

Examination in Practical Chemistry, Thursday, Oct. 13th, at 2 p.m.

BURLAND PRIZE.

(Open to Students entering the Second Year.)

INORGANIC CHEMISTRY.

FRIDAY, OCT. 7TH:—AFTERNOON, 2 TO 5.

Examiner,.....B. J. HARRINGTON, B.A., Ph.D

1. What do you understand by equivalent weights? Give examples.

2. How would you prepare (*a*) Chromic Anhydride, (*b*) Chrome Alum?

3. What are the properties of metallic Platinum? How is Platinum-sponge prepared?

4. How many cubic centimeters of Oxygen gas and how many of Hydrogen gas are necessary to form one cubic centimeter of liquid Water?

5. What elements constitute the Nitrogen group? What gradation in properties do they exhibit? Point out analogies in the composition and properties of any of their compounds.

6. How much Phosphorus is there in 100 tons of bone-ash containing 88 per cent. of $Ca_3 (PO_4)_2$?

7. How would you prepare Caustic Potash? Compare Caustic Potash and Caustic Soda as to deportment when exposed to the air.

8. Potassium Permanganate is added to an aqueous solution of Oxalic Acid acidified with Sulphuric Acid. What reaction takes place? Give the equation.

9. What volume of Carbonic Oxide can be obtained by heating 100 grams of Potassium Ferrocyanide with Sulphuric Acid?

10. How would you readily distinguish a Nitrate from a Chlorate, a Chlorate from a Chloride, a salt of Zinc from one of Aluminium, a salt of Nickel from one of Cobalt?

SENIOR MATRICULATION.

MATHEMATICS—(FIRST PAPER).

FRIDAY, SEPTEMBER 16TH:—MORNING, 9 TO 12.

Examiner,.....G. H. CHANDLER, M.A.

1. A square inch plate of metal of 0.05 inch thickness is drawn into a uniform cylindrical wire 50 feet long; find the diameter of the wire.

2. Reduce the fractions $\frac{2\,a^2 + ab - b^2}{a^3 + a^2\,b - a - b}$ and

$$\frac{(c - d)\,a^2 + 6\,(bc - bd)\,a + 9\,(b^2c - b^2d)}{(bc - bd + c^2 - cd)\,a + 3\,(b^2c + bc^2 - b^2d - bc\,d)}$$

to their lowest terms.

3. Find the square root of

$$a^2\,b^{-2} + 2a\,b^{-1} + 3 + 2a^{-1}b + a^{-2}b^2$$

4. What is the greatest common measure of

$$20\,x^4 + x^2 - 1 \text{ and } 25\,x^4 + 5\,x^3 - x - 1.$$

5. Solve the equations

(a) $$\frac{x + 2}{x - 1} - \frac{4 - x}{2\,x} = \frac{7}{3}$$

(b) $$\sqrt{x} - \sqrt{a + x} = \sqrt{\frac{a}{x}}.$$

6. If the square described on one of the sides of a triangle be equal to the squares described on the other two sides, the angle contained by these two sides is a right angle.

7. Divide a straight line into two parts, so that the rectangle contained by the whole line and one of the parts may be equal to the square one of the other part.

Show (arithmetically or otherwise) that the larger part is $\frac{1}{2}\,(\sqrt{5} - 1)$ of the whole line.

8. Inscribe an equilateral and equiangular pentagon in a circle.

9. Parallelograms which have one angle of the one equal to one angle of the other, and their sides about the equal angles reciprocally proportional, are equal in area.

10. Describe a rectilineal figure which shall be similar to one and equal to another rectilineal figure.

11. Solid (or polyhedral) angles are contained by plane angles which are together less than four right angles.

MATHEMATICS—SECOND PAPER.

FRIDAY, SEPTEMBER 16TH :—AFTERNOON, 2 TO 5.

Examiner,.....G. H. CHANDLER, M.A.

1. Find all the other trigonometrical ratios in terms of the tangent.

2. Prove that

(i) $\cos (A - B) = \cos A \cos B + \sin A \sin B$,

(ii) $\dfrac{\sin 2A + \sin A}{\cos 2A + \cos A} = \tan \dfrac{3A}{2}$,

(iii) $\dfrac{\sin (A + B)}{\sin A - \sin B} = \dfrac{\sin \left(\dfrac{A + B}{2}\right)}{\sin \left(\dfrac{A - B}{2}\right)}$.

3. The area of a triangle $= \sqrt{s\,(s-a)\,(s-b)\,(s-c)}$.

4. Solve the triangles in which

(i) $a = 409$, $b = 241$, $c = 182$,

(ii) $a = 241$, $b = 169$, $C = 104° 3' 51''$,

iii) $a = 520$, $A = 66° 2' 52''$, $C = 90°$.

5. The angle of elevation of a tower 100 feet high, and due north of an observer was 50°; what was its elevation after the observer had walked 00 feet due east?

JUNIOR MATRICULATION.

MATHEMATICS.

FRIDAY, SEPTEMBER 16TH :—MORNING, 9 TO 12.

Examiner,.....G. H. CHANDLER, M.A.

1. Reduce the fraction $\dfrac{999}{44631}$ to its lowest terms, then to a decimal, and of this extract the square root.

2. What sum when put out 6 per cent. simple interest will amount to $1,000 in 3 years?

3. Resolve $12x^2 - x - 1$, $12x^2 - 14x + 2$, $12x^3 - 5x - 2$, and $2x^3y + 5x^2y^2 + 2xy^3$ into elementary factors.

4. Find the greatest common measure of

$$x^3 - 8x + 3 \text{ and } x^6 + 3x^5 + x + 3.$$

5. Solve the equations

(a) $$\frac{17}{6x + 17} - \frac{10}{3x - 10} = \frac{1}{1 - 2x},$$

(b) $$\frac{1}{a(b - x)} + \frac{1}{b(c - x)} = \frac{1}{a(c - x)},$$

(c) $$\begin{cases} x - y - z = 6 \\ 3y - x - z = 12 \\ 7z - y - x = 24. \end{cases}$$

6. Prove that the difference of the squares of any two consecutive odd numbers is divisible by 8.

7. Parallelograms on equal bases and between the same parallels are equal to one another.

8. If the square described on one of the sides of a triangle be equal to the squares described on the other two sides, the angle contained by these two sides is a right angle.

9. If a straight line be divided into two equal and also into two unequal parts, the squares on the two unequal parts are together double of the square on half the line and of the square on the line between the points of section.

10. The angle in a semi-circle is a right angle, the angle in a segment greater than a semi-circle is less than a right angle, and the angle in a segment less than a semi-circle is greater than a right angle.

Faculty of Medicine.

MATRICULATION EXAMINATION.

GREEK.

Examiner,.....H. ASPINWALL HOWE, M.A., LL. D.

1. Translate, *without unnessessary change of construction.*—

"Ὦ ἀνδρες Ἕλληνες, οὐκ ἀνθρώπων ἀπορῶν βαρβάρων συμμάχους ὑμᾶς ἄγω, ἀλλὰ νομίζων ἀμείνονας καὶ κρείττους πολλῶν βαρβάρων ὑμᾶς εἶναι, διὰ τοῦτο προσέλαβον. Ὅπως οὖν ἔσεσθε ἄνδρες ἄξιοι τῆς ἐλευθερίας, ἧς κέκτησθε, καὶ ὑπὲρ ἧς ὑμᾶς ἐγὼ εὐδαιμονίζω. Εὖ γὰρ ἴστε, ὅτι τὴν ἐλευθερίαν ἑλοίμην ἂν ἀντὶ ὧν ἔχω πάντων καὶ ἄλλων πολλαπλασίων. Ὅπως δὲ καὶ εἰδῆτε, εἰς οἷον ἔρχεσθε ἀγῶνα, ἐγὼ ὑμᾶς εἰδὼς διδάξω. Τὸ μὲν γὰρ πλῆθος πολὺ καὶ ῥαυγῇ πολλῇ ἐπίασιν· ἂν δὲ ταῦτα ἀνάσχησθε, τὰ ἄλλα καὶ αἰσχύνεσθαί μοι δοκῶ, οἵους ἡμῖν γνώσεσθε τοὺς ἐν τῇ χώρᾳ ὄντας ἀνθρώπους. Ὑμῶν δὲ ἀνδρῶν ὄντων καὶ εὐτόλμων γενομένων, ἐγὼ ὑμῶν τὸν μὲν οἰκαδε βουλόμενον ἀπιέναι τοῖς οἴκοι ζηλωτὸν ποιήσω ἀπελθεῖν, πολλοὺς δὲ οἰμαι ποιήσειν τὰ παρ' ἐμοὶ ἑλέσθαι ἀντὶ τῶν οἴκοι."

2. Parse, without declining any words, Ὅπως δὲ καὶ εἰδῆτε, εἰς οἷον ἔρχεσθε ἀγῶνα, ἐγὼ ὑμᾶς εἰδὼς διδάξω.

3. Decline ἀνδρες, ὑμᾶς,, τοῦτο and write out the tenses προσέλαβον, ἴστε and ἑλοίμην.

4. Write, in the Indicative only and in tabular form, the first person singular of the Present, the Perfect, and the 1st. or 2d. Aorist of the verbs προσέλαβον, κέκτησθε, ἑλοίμην, ἔχω and γνώσεσθε.

5. Explain the form κρείττους and give in tabular form the Positive, Comparative and Superlative of ἀμείνονας, πολλῶν, ἄξιοι and εὐδαίμων.

6. Explain :—

(*a*) ἀνθρώπων ἀπορῶν. Give the Rule for the genitive ἀνθρώπων.

(*b*) ἧς κέκτησθε. Why is the relative ἧς in the genitive ?

(*c*) δικαδε βουλόμενον ἀπιέναι. What suffixes to some nouns of place express respectively *where*, *whither*, and *whence*? Give an example of each.

LATIN.

Examiner,.....H. ASPINWALL HOWE, M.A., LL.D.

NOTE.—Candidates may choose, in this Paper, between Cicero and Virgil.

1. Translate, *without unnecessary change of construction* :—

(*a*) Si te jam, Catilina, comprehendi, si interfici jussero, credo, erit verendum mihi, ne non hoc potius omnes boni serius a me, quam quisquam

crudelius factum esse dicat. Verum ego hoc, quod jampridem factum esse oportuit, certa de caussa nondum adducor, ut faciam. Tum denique interficiam te, quum jam nemo tam improbus, tam perditus, tam tui similis inveniri poterit, qui id non jure factum esse fateatur. Quamdiu quisquam erit, qui te defendere audeat, vives: et vives ita, ut nunc vivis, multis meis et firmis præsidiis obsessus, ne commovere te contra rempublicam possis: multorum te etiam oculi et aures non sentientem, sicut adhuc fecerunt, speculabuntur atque custodient.

(*b*) Alterum genus est eorum, qui, quamquam premuntur ære alieno, dominationem tamen exspectant, rerum potiri volunt, honores, quos quieta republica desperant, perturbata consequi se posse arbitrantur. Quibus hoc præcipiendum videtur, unum scilicet et idem, quod ceteris omnibus, ut desperent, se id, quod conantur, consequi posse. Primum omnium me ipsum vigilare, adesse, providere reipublicæ. Deinde magnos animos esse in bonis viris, magnam concordiam, maximam multitudinem, magnas præterea copias militum; deos denique immortales huic invicto populo, clarissimo imperio, pulcherrimæ urbi contra tantam vim sceleris præsentes auxilium esse laturos. Quod si jam sint id, quod cum summo furore cupiunt, adepti, num illi in cinere Urbis et sanguine civium, quæ mente consceleratā ac nefaria concupierunt, consules se ac dictatores, aut etiam reges sperant futuros? Non vident id se cupere, quod si adepti sint, fugitivo alicui aut gladiatori concedi sit necesse?

2. Parse all the words of the sentence, "Quamdiu *quisquam erit qui te* defendere *audeat, vives*. Decline the words indicated by italics.

3. Give the genitive singular and the dative plural of *alterum genus, idem, me ipsum;* also the nominative singular and plural of *scelere, pulcherrimæ urbi* and *vim*.

4. Write the principal parts of the verbs from which come *interfici, audeat, poterit, premuntur, præcipiendum, laturos, cupiunt, adepti sint*.

5. What is the principal use of the Dative case in Latin? What is the *Predicative Dative* and what the *Dativus Ethicus?* Why are they so called? Give examples of their use.

6. Explain the following:—

(*a*) Si te interfici *jussero*. Why Future *Perfect?*

(*b*) Similis *tui*. How does the resemblance expressed by similis *tibi* differ from that expressed by similis *tui?*

(*c*) *rerum* potiri. Give the rule for this genitive. What other case is found with *potiri?*

7. Put into Latin:—

(*a*) You do not perceive that the eyes and ears of many are watching you.

(*b*) Many strong guards of mine beset you.

1. Translate, *without unnecessary change of construction:*—

(*a*) Interea magno misceri murmure pontum,
Emissamque hiemem sensit Neptunus, et imis
Stagna refusa vadis, graviter commotus ; et alto
Prospiciens, summa placidum caput extulit unda.
Disjectam Æneæ toto videt æquore classem,
Fluctibus oppressos Troas cœlique ruina.
Nec latuere doli fratrem Junonis, et iræ.
Eurum ad se Zephyrumque vocat ; dehinc talia fatur :
"Tantane vos generis tenuit fiducia vestri ?
Jam cœlum terramque, meo sine numine, Venti,
Miscere, et tantas audetis tollere moles ?
Quos ego—Sed motos præstat componere fluctus :
Post mihi non simili pœna commissa luetis.
Maturate fugam, regique hæc dicite vestro—
Non illi imperium pelagi, sævumque tridentem,
Sed mihi sorte datum. Tenet ille immania saxa,
Vestras, Eure, domos. Illa se jactet in aula
Æolus, et clauso ventorum carcere regnet."

(*b*) Dixit ; et avertens rosea cervice refulsit,
Ambrosiæque comæ divinum vertice odorem
Spiravere : pedes vestis defluxit ad imos ;
Et vera incessu patuit dea. Ille ubi matrem
Agnovit, tali fugientem est voce secutus :
"Quid natum toties crudelis tu quoque falsis
Ludis imaginibus ? cur dextræ jungere dextram
Non datur, ac veras audire et reddere voces ?"
Talibus incusat, gressumque ad mœnia tendit.
At Venus obscuro gradientes aëre sepsit,
Et multo nebulæ circum dea fudit amictu,
Cernere ne quis eos, neu quis contingere posset,
Molirive moram, aut veniendi poscere causas.
Ipsa Paphum sublimis abit, sedesque revisit
Læta suas, ubi templum illi, centumque Sabæo
Thure calent aræ, sertisque recentibus halant.

2. Parse all the words of the sentence "*Ille* ubi *matrem Agnovit, toli,* fugientem est *voce* secutus. Decline the words indicated by italics, taking *tali voce* together.

3. Give the genitive singular and the dative plural of *toto aquore, simili pœna* and *ille ;* also the nominative singular and plural of *numine, regi vestro* and *domos.*

4. Write the principal parts of the verbs from which come *extulit, tollere, componere, refulsit, defluxit, agnovit, ludis, poscere.*

5. What is the principal use of the Dative case in Latin? What is the *Predicative Dative*, and what the *Dativus Ethicus?* Why are they so called? Give examples of their use.

6. Explain the following:—

(*a*) Vestros, Eure, *domos*. What accusative is this?

(*b*) Nec *latuere* doli. Is this verb transitive or intransitive? Why?

(*c*) Ipsa *Paphum* sublimis abit. Give the Rule for the case *Paphum*.

7. Put into Latin.

(*a*) The rosy neck of Venus shone as she turned away.

(*b*) Æneas found that he was being mocked by his mother.

ENGLISH.

Examiner,..... H. ASPINWALL HOWE, M.A., LL.D.

1. Analyse the following passage from Shakspeare's Henry VIII, and parse carefully the words indicated by italics:—

Orpheus with *his* lute *made* trees
And the *mountain* tops *that* freeze,
Bow themselves, *when* he did sing.

2. Parse the word *above* which occurs three times in the following sentence:—

"The above remarks, as we noticed above, apply above all to the labouring classes."

3. Define *number*, *gender*, *case*. Write out, both in the singular and in the plural, the different cases, masculine and feminine, of *lad*, *hero*, *duke*.

4. Write the Past Tense and the Perfect Participle of the verbs *grind*, *catch*, *do*, *shoe*, *slay*, *throw*, *bid*, *cling*, *lead*, *rise*, *deal*, *wear*.

5. Convert by the help of prefixes or suffixes the following adjectives into verbs:—*Large*, *just*, *humble*, *strong*.

Convert also the following verbs into nouns:—*Weave*, *compel*, *receive*, *dig*, *think*.

6. Analyse and derive the following words, giving their meaning:—*anniversary*, *pseudonym*, *indomitable*, *thermometer*, *annihilate*. Shew, by analogy of other similar words, that *photogram* would have been a more correct word than *photograph*.

7. Correct errors in the following, and give reasons for the corrections:—

(*a*) He did no more than it was his duty to have done.

(*b*) I heard it from somebody or other, I forget who.

(*c*) While walking in my garden, an idea suddenly occurred to me.

(*d*) Shakspeare is greater than any dramatist.

(*e*) I have my aunt, my uncle and my father's leave.

8. Write a short Composition on the subject of "The sea-side."

9. Write legibly and punctuate correctly the Dictation which will be read to you.

BRITISH HISTORY.

Examiner,..... H. ASPINWALL HOWE, M.A., LL.D.

1. Between what dates were the Romans in possession of Britain? In what respects was their tenure beneficial to the country and people? What was the cause of their withdrawal?

2. What were the political troubles to which Henry VII was exposed during his reign? What was the character of this king?

3. Name three battles fought on English ground, one in Ireland, and one in Scotland, all five of a decisive character. State clearly the contention decided by each of them.

4. Give three or four instances of the unconstitutional exercise of power by Sovereigns of England, with the results.

5. What events in British History are connected with Caractacus, Baliol, Joan of Arc, John Pym, Judge Jeffreys?

6. In the relations of recent times between Britain and the United States, what is meant by "The Alabama claims?" Give a brief account of the matter.

GEOGRAPHY.

1. Define *estuary*, *delta*, *frith*, with etymology, if you can. Name the greatest estuary and three of the largest delta.

2. Why is it that so few large rivers run westward? How is it that France furnishes an exception to the Rule? Name the rivers of that country which flow into the Atlantic.

3. Which of the United States are situated on the Atlantic? Name them in order from North to South, and account historically for their names.

4. What straits separate Ceylon, Sumatra and Formosa, respectively, from the mainland? What straits unite the Red Sea and the Persian Gulf, respectively, with the Arabian Sea?

5. Where and what are Teneriffe, the Hague, the Gold Coast, Oude, the Sound, the Punjaub, the Pruth, Manitoulin, Canso, Nicaragua.

FRENCH.

Examiner,.....H. ASPINWALL HOWE, M.A., LL.D.

1. Translate, *as closely as difference of idiom will admit:*

(*a*)—Les Moscovies, voyant arriver les Su édois à eux, crurent avoir toute une armée à combattre. La garde avancée de cinq mille hommes, qui gardait entre des rochers un poste où cent hommes résolus pouvaient arrêter une armée entière, s'enfuit à la première approche des Suédois.

Les vingt mille hommes qui étaient derrière, voyant fuir leurs compagnons, prirent l'épouvante, et allèrent porter le désordre dans le camp. Tous les postes furent emportés en deux jours; et ce qui en d'autres occasions eût été compté pour trois victoires, ne retarda pas d'une heure la marche du roi. Il parut donc enfin, avec ses huit mille hommes fatigués d'une si longue marche, devant un camp de quatre-vingt mille Russes, bordé de cent cinquante canons. A peine ses troupes eurent-elles pris quelque repos que, sans délibérer, il donna ses ordres pour l'attaque.

(*b*)—L'achevêque d'Upsal est en possession de faire la cérémonie du sacre et du couronnement; c'est de tant de droits que ses prédécesseurs s'étaient arrogés, presque le seul qui lui reste. Après avoir, selon l'usage, donné l'onction au prince, il tenait entre ses mains la couronne pour la lui remettre sur la tête : Charles l'arracha des mains de l'archevêque, et se couronna lui-même, en regardant fièrement le prélat. La multitude, à qui tout air de grandeur impose toujours, applaudit à l'action du roi; ceux même qui avaient le plus gémi sous le despotisme du père se laissèrent entrainer à louer dans le fils cette fierté qui était l'augure de leur servitude.

2. *Voyant* arriver les suédois. Why not *voyants*, to agree with Moscovites? What is the Rule about the *Present participle*, in this respect. Why are *ayant* and *étant* never found in the feminine or in the plural?

3. *Quelque* repos. When is *some* translated by *quelque* instead of the Partitive article?

4. What part of the Verb is found after Prepositions in French? Point out examples of the Rule in the above extracts, and also one exception to it.

5. Write in full the Presént Indicative of *s'en aller* negatively; the Future Indicative of *pouvoir* interrogatively; and the Present Subjunctive of *faire*.

6. Translate into French :—

(*a*) When the Swedes came up, the Russians had fled.
(*b*) No one came before half-past twelve.
(*c*) I am having a cloth coat made for myself.

GEOMETRY.

Examiner,.....H. Aspinwall Howe, M.A., LL.D.

1. If two triangles have two sides of the one equal to two sides of the other, each to each, and likewise their bases equal, the angle which is contained by the two sides of the one shall be equal to the angle which is contained by the two sides, equal to them, of the other.

2. If two straight lines cut one another, the vertical or opposite angles shall be equal.

3. Triangles on equal bases, and between the same parallels, are equal to one another.

4. If a straight line be divided into any two parts, the rectangles contained by the whole and each of the parts are together equal to the square on the whole line.

(*a*) Show that Prop. 1, Bk. II. can be used to prove this.

5. If a straight line be bisected and produced to any point, the square on the whole line thus produced, and the square on the part of it produced, are together double of the square on half the line bisected and of the square on the line made up of the half and the part produced.

NATURAL PHILOSOPHY.

1. Explain, by aid of a diagram shewing the *Resolution* of *forces*, how it is that a ship is able to sail against the wind.

2. Shew from the property of the *Centre* of *Gravity* that in the common balance it matters not in what part of the scale-pan the weight is placed whether in the centre or at the edge.

3. Sketch a system of pulleys in which the *Power* is to the *Weight* in the ratio of 1 to 4.

4. What are *Artesian wells* and why are they so called ? Explain, with a diagram, the action which produces them.

5. How many cubic inches of iron must be attached to a cubic foot of wood so that it may just sink in water, it being given that the *Specific Gravity* of iron is 7.2 and that of the wood 0.7 ?

ARITHMETIC AND ALGEBRA.

Examiner.....H. ASPINWALL HOWE, M.A., LL.D.

Note.—The work must be shewn.

1. What number must be subtracted from the numerator of $\frac{24}{35}$ in order that the resulting fraction may be $\frac{7}{8}$ of the original fraction ?

2. Perform, *wholly in decimals*, the operations indicated in the following :—

$$(\tfrac{1}{5} \text{ of } 7\tfrac{1}{2} + \tfrac{17}{25} - \cdot 02) \div \cdot 025$$

3. Reduce £405..6..8 to francs and centimes, taking 25¼ francs to be the value of £1, and 100 centimes to the franc.

4. A grocer bought 52lbs of tea at 75 cents a lb., 65 lbs at 86 cents and 91 lbs at 98 cents. Find the *average* cost per lb.

5. In the preceding question, if he mixes the three sorts, at what price per lb. must he sell the mixture so as to gain 40 per cent on the cost ?

ALGEBRA.

1. What is the value of $\frac{x}{x+y} + \frac{x}{x-y} - \frac{y^2}{x^2-y^2}$ when $y = \frac{3x}{4}$?

2. Divide $a^3 + b^3 + 8c^3 - 6abc$ by $a + b + 2c$

3. Reduce to simplest form $(1 - \frac{b^4}{a^4}) \div (\frac{a}{b} + \frac{b}{a})$

4. Solve the equations:

$$(1) \quad \frac{1}{x-a} - \frac{1}{x-b} = \frac{a-b}{x^2-ab}$$

$$(2) \quad \left\{ \begin{array}{l} 2\,(x-3) - \frac{y-3}{5} = 3 \\ 3\,(y-5) + \frac{x-2}{3} = 10 \end{array} \right\}$$

5. A sum of money was lent at 6 per cent, simple interest. In 10 years the interest amounted to £12 less than the sum lent. What was the sum lent?

CHEMISTRY AND BOTANY.

Examiner,.....H. ASPINWALL HOWE, M.A., LL.D.

1. Point out the distinction between the scope of *Chemistry* and that of *Physics*.

2. Explain the relations existing between the *metre*, the *litre* and the *gramme*.

3. Explain the mode of preparation of *Nitrous Oxide*, and state its uses.

4. What are *mordants* and *lakes*? Give examples.

5. A sample of powder treated with *Hydrochloric Acid* dissolves with effervescence; the solution being made *Alkaline* and treated with *Oxalate* of *Ammonia* yields a white precipitate. What is the composition of the powder?

6. Account for the fact that *lime-water* exposed to the air becomes turbid.

BOTANY.

1. Describe the structures found in a flower of *morning-glory* or of *petunia*.

2. Explain how such a plant as *Virginia creeper* climbs a smooth wall.

3. What is *grafting*, and what is the object of this operation ?

3. Name in the order of value three chemical elements removed from the soil by a plant such as *wheat*.

5. A gardener in the spring wishes to grow a supply of *carrot seed* by the autumn of the same year. How must he proceed ?

7. Describe the bark, leaves and flowers of any common *Canadian timber tree*.

SESSIONAL EXAMINATIONS, 1888.

FACULTY OF ARTS.

SESSIONAL EXAMINATIONS, 1888.

FACULTY OF ARTS.

SESSIONAL EXAMINATIONS, 1888.

CLASSICS.

FIRST YEAR.

GREEK.—XENOPHON.—HELLENICA, BOOK I.

THURSDAY, APRIL 5TH.:—MORNING, 9 TO 12.

Examiner, ...A. J. EATON, M.A., PH. D.

1. Translate:—

(A) Κῦρος τόν τε πατέρα ἔφη ταῦτα ἐπεσταλκέναι καὶ αὐτὸς οὐκ ἄλλ' ἐγνωκέναι, ἀλλὰ πάντα ποιήσειν· ἔχειν δὲ ἥκειν τάλαντα πεντακόσια· ἐὰν δὲ ταῦτα ἐκλίπῃ, τοῖς ἰδίοις χρήσεσθαι ἔφη, ἃ ὁ πατὴρ αὐτῷ ἐδωκεν· ἐὰν δὲ καὶ ταῦτα, καὶ τὸν θρόνον κατακόψειν, ἐφ' οὗ ἐκάθητο, ὄντα ἀργυροῦν καὶ χρυσοῦν. οἱ δὲ ταῦτ' ἐπῄνουν καὶ ἐκέλευον αὐτὸν τάξαι τῷ ναυτῃ δραχμὴν Ἀττικήν, διδάσκοντες ὅτι ἂν οὗτος ὁ μισθὸς γένηται, οἱ τῶν Ἀθηναίων ναῦται ἀπολείψουσι τὰς ναῦς καὶ μεῖω χρήματα ἀναλώσει.

(B) αἱ τῶν Λακεδαιμονίων ἀντιτεταγμέναι ἦσαν ἅπασαι ἐπὶ μιᾶς ὡς πρὸς διέκπλουν καὶ περίπλουν παρεσκευασμέναι, διὰ τὸ βέλτιον πλεῖν. εἶχε δὲ τὸ δεξιὸν κέρας Καλλικρατίδας. Ἕρμων δὲ Μεγαρεὺς ὁ τῷ Καλλικρατίδᾳ κυβερνῶν εἶπε πρὸς αὐτὸν ὅτι εἰη καλῶς ἔχον ἀποπλεῦσαι· αἱ γὰρ τριήρεις τῶν Ἀθηναίων πολλῷ πλείονες ἦσαν. Καλλικρατίδας δὲ εἶπεν ὅτι ἡ Σπάρτη οὐδὲν κάκιον οἰκεῖται αὐτοῦ ἀποθανόντος, φεύγειν δὲ αἰσχρὸν ἔφη εἶναι. μετὰ δὲ ταῦτα ἐναυμάχησαν χρόνον πολύν, πρῶτον μὲν ἀθρόαι, ἔπειτα δὲ διεσκεδασμέναι.

(C) οὐκοῦν δίκαιον τὰ μὲν πρὸς τοὺς πολεμίους μὴ καλῶς πραχθέντα τοὺς πρὸς τούτους ταχθέντας ὑπέχειν λόγον, τοὺς δὲ πρὸς τὴν ἀναίρεσιν, μὴ ποιήσαντας ἃ οἱ στρατηγοὶ ἐκέλευσαν, διότι οὐκ ἀνείλοντο κρίνεσθαι. τοσοῦτον δ' ἔχω εἰπεῖν ὑπὲρ ἀμφοτέρων ὅτι ὁ χειμὼν διεκώλυσε μηδὲν πρᾶξαι ὧν οἱ στρατηγοὶ παρεσκευάσαντο. τούτων δὲ μάρτυρες οἱ σωθέντες ἀπὸ τοῦ αὐτομάτου, ὧν εἷς τῶν ἡμετέρων στρατηγῶν ἐπὶ καταδύσης νεὼς διασωθείς, ὃν κελεύουσι τῇ αὐτῇ ψήφῳ κρίνεσθαι, καὶ αὐτὸν τότε δεόμενον ἀναιρέσεως, ἥπερ τοὺς οὐ πραξαντας τὰ προσταχθέντα. μὴ τοίνυν, ὦ ἄνδρες Ἀθηναῖοι, ἀντὶ μὲν τῆς νίκας καὶ τῆς εὐτυχίας ὁμοια ποιήσητε τοις ἡττημένοις τε καὶ ἀτυχοῦσιν, ἄντὶ δὲ τῶν ἐκ θεοῦ ἀναγκατων ἀγνωμονεὶυδόξητε, προδοσίαν καταγνόντες ἀντὶ τῆς ἀδυναμίας, οὐκ ἱκανοὺς γενομένους διὰ τὸν χειμῶνα πρᾶξαι τὰ προσταχθέντα· ἀλλὰ πολὺ δικαιότερον στεφάνοις γεραίρειν τοὺς νικῶντας ἢ θανάτῳ ζημιοῦν πονηροις ἀνθρώποις πειθομένους.

2. State clearly the rules of Indirect Discourse in Greek. What construction usually follows *φημί*, *εἶπον* and *λέγω*? In the sentence *ἐὰν δὲ ταῦτα ἐκλίπῃ....ἐφη*, what other construction was possible? Remark upon the mode of expression in the clause *διδάσκοντες....ἀπολείψουσι*, and explain how such a clause must be represented in English Explain the optative *εἴη* in Ext. B.

3. (*a*) How are negative commands in Greek expressed? Distinguish between the tenses thus employed. Give an example from the above extracts and show how it illustrates the principle stated. (*b*) *διεκώλυσε μηδὲν πρᾶξαι*: what other constructions may be employed? (*c*) Distinguish between *μή* and *οὐ* when used with participles, and explain by examples in Ext. (C); also between *οὐκοῦν* and *οὔκουν*.

4. (*a*) What verb is omitted in *ἐὰν δὲ καὶ ταῦτα*, (Ext. A)? (*b*) What are the subjects of *κρινέσθαι* and *ὑπέχειν* (Ext. C.)? (*c*) Explain the case in the following: *τὰ μὲν....πράχθεντα* (what other construction would seem more natural?), *προδοσίαν*, *πονηροῖς* (Ext. C.); *πολλῷ*, *χρονόν* (Ext. B). (*d*) Give the uncontracted form of *ἀργυροῦς*. What peculiarity of contraction?

5. (*a*) Classify verbs in *ω* with reference to the formation of the present stem from the simple stem, and illustrate by examples. (*b*) Give the principal parts of *ἐπιστέλλω*, *γιγνώσκω*, *ποιέω*, *ἁλίσκομαι*, *θνήσκω*, *πείθω*, *ἔχω*.

6. Decline (accenting): *ναῦς*, *πλείων*, *ὅστις*. Conjugate *λύω* in pres. subjunct. pass., *στέλλω* in 1 aor. opt. pass., *δίδωμι* in 2 aor. ind. act, and *φημί* in imperf. indicative.

7. State where the following forms are found, and carefully explain their formation from the simple stem: *εἶχον*, *ἐπῆνουν*, *διεσκεδασμέναι*, *ἐπεῖσαν*, *ἦτει*, *ἀκηκόασι*.

8. Comment upon the following terms and phrases: *διωβελία*, *ἐπιβολή*; *προβολή*; *χειροτονία*; *Ἀπατούρια*; *ἐπὶ κέρως*; *παράνομα συγγεγραφέναι*; *τοὺς ἐν τῇ ἡλικίᾳ ὄντας*.

9. (*a*) What would be the value of the *δραχμὴ Ἀττική*, and of a *τάλαντον*, in English money? (*b*) *τῷ δὲ ἄλλῳ ἔτει, ᾧ ἦν Ὀλυμπιὰς τρίτη καὶ ἐνενηκοστή κτλ.*; Express this date according to our notation Explain.

10. Where are the Arginusae? Give the date and an account of the battle of Arginusae, as described by Xenophon.

INTERMEDIATE EXAMINATION.

GREEK.—EURIPIDES.—MEDEA.

THURSDAY, APRIL 5TH, 1888.—MORNING, 9 TO 12.

Examiners, ... { REV. GEORGE WEIR, LL. D.
{ A. J. EATON, M.A., PH. D.

1. Translate :—

(A) ἰαχὰν ἄϊον πολύστονον
γόων, λιγυρὰ δ' ἄχεα μογερὰ
βοᾷ τὸν ἐν λέχει προδόταν κακόνυμφον·
θεοκλυτεῖ δ' ἄδικα παθοῦσα
τὰν Ζηνὸς ὁρκίαν Θέμιν, ἃ νιν ἔβασεν
Ἑλλάδ' ἐς ἀντίπορον
δι' ἅλα νύχιον ἐφ' ἁλμυρὰν
πόντου κλῃδ' ἀπέραντον.

(B) ὁ δ' ἐς τοσοῦτον μωρίας ἀφίκετο
ὥστ', ἐξὸν αὐτῷ τἀμ' ἐλεῖν βουλεύματα
γῆς ἐκβαλόντι, τήνδ' ἀφῆκεν ἡμέραν
μεῖναί μ', ἐν ᾗ τρεῖς τῶν ἐμῶν ἐχθρῶν νεκροὺς
θήσω, πατέρα τε καὶ κόρην πόσιν τ' ἐμόν.

(C) πέμψω γὰρ αὐτοὺς δῶρ' ἔχοντας ἐν χεροῖν,
νύμφῃ φέροντας, τήνδε μὴ φεύγειν χθόνα,
λεπτόν τε πέπλον καὶ πλόκον χρυσηλάτου·
κἀνπερ λαβοῦσα κόσμον ἀμφιθῇ χροΐ,
κακῶς ὀλεῖται πᾶς θ' ὃς ἂν θίγῃ κόρης·
τοιοῖσδε χρίσω φαρμάκοις δωρήματα.

(D) ἀλλ' οὐ γὰρ ἂν σε μυρίοις ὀνείδεσι
δάκοιμι· τοιόνδ' ἐμπέφυκέ σοι θράσος·
ἔρρ', αἰσχροποιὲ καὶ τέκνων μιαιφόνε.
ἐμοὶ δὲ τὸν ἐμὸν δαίμον' αἰάζειν πάρα,
ὃς οὔτε λέκτρων νεογάμων ὀνήσομαι,
οὐ παῖδας οὓς ἔφυσα κἀξεθρεψάμην
ἔξω προσειπεῖν ζῶντας, ἀλλ' ἀπώλεσα.

(E) φεῦ φεῦ· τί προσδέρκεσθέ μ' ὄμμασιν, τέκνα;
τί προσγελᾶτε τὸν πανύστατον γέλων;
αἰαῖ· τί δράσω; καρδία γὰρ οἰχεται,
γυναῖκες, ὄμμα φαιδρὸν ὡς εἶδον τέκνων.

οὐκ ἂν δυναίμην· χαιρέτω βουλεύματα
τὰ πρόσθεν· ἄξω παῖδας ἐκ γαίας ἐμούς.
τί δεῖ με πατέρα τῶνδε τοῖς τούτων κακοῖς
λυποῦσαν αὐτὴν δὶς τόσα κτᾶσθαι κακά ;
οὐ δῆτ' ἔγωγε. χαιρέτω βουλεύματα.
καίτοι τί πάσχω ; βούλομαι γέλωτ' ὀφλεῖν
ἐχθροὺς μεθεῖσα τοὺς ἀζημίους ;
τολμητέον τάδ'. ἀλλὰ τῆς ἐμῆς κάκης,
τὸ καὶ προσέσθαι μαλθακοὺς λόγους φρενός

II. (*a*) Explain the following forms, giving their principal parts, and showing the formation of the present from the simple stem :—(1) ἄϊον, (2) ὀλεῖται, (3) δάκοιμι, (4) θίγῃ, (5) ὀφλεῖν, (6) πάσχω.

(*b*) State clearly the principles of syntax explaining the following (1) cases :—*μωρίας, ἐξόν, ἡμέραν, κόρης, κακοῖς, κάκης* ; (2) moods and tenses :—*μεῖναι, ἀμφιθῇ, θίγῃ, δάκοιμι, δράσω, δυναίμην, προσέσθαι.*

(*c*) What dialect prevails in Ext. A. ? Explain. Give three examples, with their Attic equivalents. Decline Θέμις and αἰδώς in the singular.

(*d*) Give the derivation (*any five*) :—*πρόδοταν, θεοκλυτεῖ, ἀπέραντον, χρυσήλατον, αἰσχροποιέ, πανύστατον, χαρακτήρ, αἰάζειν.* Distinguish as to meaning between *γόων* and *γοῶν* ; *τρόχος* and *τροχός* ; *οἰμοί, οἴμοι* ; *θάρσος, θράσος.*

III. Without translating, remark upon any grammatical peculiarities :

(*a*) ἵμερός μ' ὑπῆλθε γῆ τε κοὐρανῷ
λέξαι μολούσῃ δεῦρο δεσποίνης τύχας.

(*b*) οἴμοι τί λέξεις ; ὡς μ' ἀπώλεσας, γύναι.

(*c*) οὐκ οἶδ' ἂν εἰ πείσαιμι, πειρᾶσθαι δὲ χρή.

Write short explanatory notes on :

(*d*) ἀλλ' οἵδε παῖδες ἐκ τρόχων πεπαυμένοι
στειχουσι.

(*e*) ἐπ' ἀμφιπύλου γὰρ ἔσω μελάθρου βοὰν
ἔκλυον.

(*f*) ἐς Ἥρας τέμενος Ἀκραίας θεοῦ.

(*g*) ὀμφαλὸν γῆς θεσπιῳδόν.

(*h*) γῇ τῇδε Σισύφου.

IV. Write out a scheme (1) of Iambic Trimeter of tragedy, (2) of Anapaestic Dimeter. (3) What metres are employed in the above

extracts. (4) Mark the quantity of each syllable, divide into feet, and name the metre of which the following extracts are examples:

(α) τὸ παρὸν γὰρ ἔχει τέρψιν ἀφ' αὑτοῦ.
δαιτὸς πλήρωμα βροτοῖσιν.

(β) Ἄνω ποταμῶν ἱερῶν χωροῦσι παγαί,
καὶ δίκα καὶ πάντα πάλιν στρέφεται.

(γ) ἀκούεις βοὰν ἀκούεις τέκνων ;
ἰὼ τλᾶμον, ὦ κακοτυχὲς γύναι.

V. Answer *any three* of the following :—

(1) Give a short sketch of the life of Euripides, the number of plays he wrote and the number extant.

(2) Give the Dramatis Personae of the Medea, the names of the other plays with which the Medea formed a tetralogy, the date of its representation, the place it held in the prize-list, with the names of Euripides' successful competitors there.

(3) Of what two distinct parts does an Attic tragedy consist ? State briefly the origin of each and how these two elements were afterward united.

(4) Give a general description of a Greek theatre, explaining the position of the stage, orchestra, thymele, etc.

THIRD YEAR.

GREEK.—AESCHYLUS.—PROMETHEUS VINCTUS.

WEDNESDAY, APRIL, 11TH :—MORNING, 9 TO 12.

Examiner.....REV. GEORGE CORNISH, LL.D.

T[illegible]—

(A) [illegible]

ΗΦ. καὶ δὴ πρόχειρα [illegible] πάρα.

ΚΡ. ἔα βέα νιν ἀμφὶ χερσὶν ἐγκρατεῖ σθένει
δυσσήνῳ θ' ὑφῃ, παρασφίγγου πολὺ πέτραις.

ΗΦ. περαίνεται δὴ καὶ παρὰ τοῦργον τόδε

ΚΡ. ἄρασσε μᾶλλον, σφίγγε, μηδαμῇ χαλᾶ.
δεινὸς γὰρ εὑρεῖν κἀξ ἀμηχάνων πόρους.

ΗΦ. ἄραρεν ἥδε γ' ὠλένη ἀσφαλῶς.

ΚΡ. καὶ τήνδε νῦν πόρπακον ἀσφαλῶς, ἵνα
μάθῃ σοφιστὴς ὢν Διὸς νωθέστερος.

ΗΦ. πλὴν τοῦδ' ἂν οὐδεὶς ἐνδίκως μέμψαιτό μοι.

ΚΡ. ἀδαμαντίνου νῦν σφηνὸς αὐθάδη γνάθον
στέρνων διαμπὰξ πασσάλευ' ἐρρωμένως.

ΗΦ. αἰαῖ, Προμηθεῦ, σῶν ὑπὲρ στένω πόνων.

στένεις ; ὅπως μὴ σαυτὸν οἰκτιεῖς ποτέ.
ΗΦ. ὁρᾷς θέαμα δυσθέατον ὄμμασιν.
ΚΡ. ὁρῶ κυροῦντα τόνδε τῶν ἐπαξίων.
ἀλλ' ἀμφὶ πλευραῖς μασχαλιστῆρας βάλε.

(B) ὃ δ' οὖν ἐρωτᾶτ', αἰτίαν καθ' ἥντινα
αἰκίζεταί με, τοῦτο δὴ σαφηνιῶ.
ὅπως τάχιστα τὸν πατρῷον ἐς θρόνον
καθέζετ', εὐθὺς δαίμοσιν νέμει γέρα
ἄλλοισιν ἄλλα καὶ διεστοιχίζετο
ἀρχήν. βροτῶν δὲ τῶν ταλαιπώρων λόγοι
οὐκ ἔσχεν οὐδέν', ἀλλ' ἀϊστώσας γένος
τὸ πᾶν ἐχρῄζεν ἄλλο φιτῦσαι νέον.
καὶ τοισίδ' οὐδεὶς ἀντέβαινε πλὴν ἐμοῦ.
ἐγὼ δ' ἐτόλμησ'· ἐξελυσάμην βροτοὺς
τοῦ μὴ διαρραισθέντας εἰς Ἄιδου μολεῖν.

(C) ὑπὸ δὲ κηρόπλαστος ὀτοβεῖ δόναξ
ἀχέτας ὑπνοδόταν νόμον· ἰὼ ἰώ, πόποι,
ποῖ, πόποι, ποῖ μ' ἄγουσι τηλέπλανοι πλάναι ;
τί ποτέ μ', ὦ Κρόνιε,
ποῖ, τί ποτε ταῖσδ' ἐνέζευξας εὐ-
ρὼν ἁμαρτοῦσαν ἐν πημοσύναις, ἔ ἔ,
οἰστρηλάτῳ δὲ δείματι δειλαίαν
παράκοπον ὧδε τείρεις ;
πυρί με φλέξον, ἢ χθονὶ κάλυψον, ἢ
ποντίοις δάκεσι δὸς βορᾶν,
μηδέ μοι φθονήσῃς
εὐγμάτων, ἄναξ.
ἄδην με πολύπλανοι πλάναι
γεγυμνάκασιν. οὐδ' ἔχω μαθεῖν ὅπῃ
πημονὰς ἀλύξω.
κλύεις φθέγμα τᾶς βούκερω παρθένου :

2. (*a*) Ext. (A) (1) *πάρα*, distinguish from *παρά*. (2) *δεινὸς εὑρεῖν*,—what use of the Infin.? (3) *ἄραρεν*, note the quantity of the penult, parse and distinguish. (4) *ἂν οὐδεὶς μέμψαιτο. ὅπως μὴ σαυτὸν οἰκτιεῖς*,—Explain these grammatical usages. (*b*) Ext. (B) (1) *νέμει—διεστοιχίζετο*,—why this change of tense? (2) Give the order of the sense in vss. 6-8. (3) Construe *ἐξελυσάμην .....μολεῖν*, and explain this use of *μή*. (*c*) Ext. (C) (1) How is *ὑπὸ* in vs. 1. used? (2) *ὑπνοδόταν νόμον*,—what Accus.? (3) *μηδέ μοι φθονήσῃς εὐγμάτων*,—explain the construction.

3. (*a*) Comment on the forms *σφέ*, *νίν*, *σφῷν*, *ὀθούνεκα*. (*b*) Distin-

guish between :—*νῦν* and *νύν*, *δίος*, and *διός*, *ἦσαν*, and *ἧσαν*, *δεῖξαι* and *δείξαι*. (*c*) Define *Crasis* and *Synizesis*, and form Crases of the following :—*ὁ ἐξ*, *ὁ ἀνήρ*, *καὶ ἀν*, *καὶ εἶτα*, *τοὶ ἀν*, *καὶ οἱ*, *καὶ ἐν*.

4. Translate carefully the following extt., adding a note where you think it meet,on any grammatical usage, or peculiarity of expression:—

(*a*) *ὡς ἂν διδαχθῇ τὴν Διὸς τυραννίδα στέργειν, φιλανθρώπου δε παύεσθαι τρόπου.*

(*b*) *πάντως δ' ἀνάγκη τῶνδέ μοι τόλμαν σχεθεῖν.*

(*c*) *ὅπως μὴ σαυτὸν οἰκτιεῖς ποτέ.*

(*d*) *καὶ σεαυτὸν οὐκ ἔχεις*
εὑρεῖν ὁποίοις φαρμάκοις ἰάσιμος.

(*e*) *ὡς τὴν Διὸς τυραννίδ' ἐκπέρσων βίᾳ*

5. Parse the following verbs, giving the principal parts :—*προκήδου ἀλύξω*, *προσέπτα*, *παρεξίασι*, *ἄγαγες*, *ἐκτακείη*, *ποτνισσομένα*, *ἀπαλλαγῶ ἦσαν*, *λέλακε*, *πεμανθῇς*, *ἀφίξαι*.

6. (*a*) Point out the Doric forms in ext. (C) and give their equivalents in Attic. (*b*) Explain the use of the Doric dialect in the Choral parts. (*c*) Comment on the importance of the particles in the dialogue, and state as accurately as you can the import of the following combinations :—*ἦ μήν*, *δ' οὖν*, *πῶς γάρ*, *οὐ δῆτα*, *ἦ ποὐ*.

7. (*a*) Write down (1) the 3rd Sing. Pres. Ind. ; (2) the Part. Pres. ; (3) the Pres. Infinit. of *εἰμί*, *εἶμι*, *ἴημι*, and translate them into Latin. (*b*) Name the cases governed by *μετά*, *περί*, and *ἐπί*, severally, and point out how difference of case gives difference of meaning. (*c*) State the general rule for the sequence of Tenses in Greek. How, and why is it disregarded ? Illustrate. (*d*) Distinguish between the meanings, in Latin and English of the following groups of Interrogative Particles :—(1) *ἦ γάρ* ; *ἆρα* ; (2) *ἆρα οὐ* ; (3) *ἆρα μή* ;

8. (*a*) Give the correct designation of the metre used in the dialogue of this Drama, and write down the scheme. (*b*) Scan the first four verses of either ext. (A) or (B). (*c*) How were the characters of Prometheus and Io represented ?

B.A. ORDINARY EXAMINATION.

MONDAY, APRIL 16TH :—MORNING, 9 TO 12.

GREEK — { AESCHINES.—CONTRA CTESIPHONTEM.
AESCHYLUS.—PROMETHEUS VINCTUS.

Examiner,.....REV. GEORGE CORNISH, LL.D.

1. Translate :—

(A) Ὡς τοίνυν καὶ τὴν τῶν τειχοποιῶν ἀρχὴν ἦρχεν, ὅθ' οὗτος τὸ ψήφισμα ἔγραψε, καὶ τὰ δημόσια χρήματα διεχείριζε καὶ ἐπιβολὰς ἐπέβαλλε, καθάπερ οἱ ἄλλοι ἄρχοντες, καὶ δικαστηρίων ἡγεμονίας ἐλάμβανε, τούτων ὑμῖν αὐτὸν Δημοσθένην καὶ Κτησιφῶντα μάρτυρας παρέξομαι. ἐπὶ γὰρ Χαιρώνδου ἄρχοντος θαργηλιῶνος μηνὸς δευτέρᾳ φθίνοντος ἐκκλησίας οὔσης ἔγραψε ψήφισμα Δημοσθένης ἀγορὰν ποιῆσαι τῶν φυλῶν σκιροφοριῶνος δευτέρᾳ ἱσταμένου καὶ τρίτῃ, καὶ ἐπέταξεν ἐν τῷ ψηφίσματι ἑκάστης τῶν ἐργων ἑλέσθαι τοὺς ἐπιμεληθησομένους τῶν ἔργων ἐπὶ τὰ τείχη καὶ ταμίας, καὶ μάλα ὀρθῶς, ἵν' ἡ πόλις ἔχοι ὑπεύθυνα σώματα, παρ' ὧν ἐμελλε τῶν ἀνηλωμένων λόγον ἀπολήψεσθαι. καί μοι λέγε τὰ ψηφίσματα.

(B) κατιδόντες δ' αὐτὸν οἱ τῇ τῆς πόλεως προσπολεμοῦντες ἡσυχίᾳ ἀσμενοι παρεκάλουν ἐπὶ τὸ βῆμα, τὸν μόνον ἀδωροδόκητον ὀνομάζοντες τῇ πόλει· ὁ δὲ παριὼν ἀρχὰς αὐτοῖς ἐνεδίδου πολέμου καὶ ταραχῆς. οὗτός ἐστιν, ὦ Ἀθηναῖοι, ὁ πρῶτος ἐξευρὼν Σέρριον τεῖχος καὶ Δορίσκον καὶ Ἐργίσκην καὶ Μυρτίσκην καὶ Γάνος καὶ Γανίδα, χωρία, ὧν οὐδὲ τὰ ὀνόματα ἤδειμεν πρότερον. καὶ εἰς τοῦτο φέρων περιέστησε τὰ πράγματα, ὥστ' εἰ μὲν μὴ πέμποι Φίλιππος πρέσβεις, καταφρονεῖν αὐτὸν ἔφη τῆς πόλεως, εἰ δὲ πέμποι, κατασκόπους πέμπειν, ἀλλ' οὐ πρέσβεις. εἰ δὲ ἐπιτρέπειν ἐθέλοι πόλει τινὶ ἴσῃ καὶ ὁμοίᾳ περὶ τῶν ἐγκλημάτων, οὐκ εἶναι κριτὴν ἴσον ἡμῖν ἔφη καὶ Φιλίππῳ. Ἀλόννησον ἐδίδου· ὁ δ' ἀπηγόρευε μὴ λαμβάνειν, εἰ δίδωσιν, ἀλλὰ μὴ ἀποδίδωσι, περὶ συλλαβῶν διαφερόμενος.

(C) τούτων δὲ ἐχόντων οὕτως αἰσθόμενος Δημοσθένης, καὶ τοὺς Βοιωτάρχας ὑποπτεύσας μέλλειν εἰρήνην ἰδίᾳ ποιεῖσθαι χρυσίον ἄνευ αὐτοῦ παρὰ Φιλίππου λαβόντας, ἀβίωτον ἡγησάμενος εἶναι, εἴ τινος ἀπολειφθήσεται δωροδοκίας, ἀναπηδήσας ἐν τῇ ἐκκλησίᾳ, οὐδενὸς ἀνθρώπων λέγοντος οὐθ' ὡς δεῖ ποιεῖσθαι πρὸς Φίλιππον εἰρήνην οὐθ' ὡς οὐ δεῖ, ἀλλ' ὡς ἔφετο, τοῦτο κήρυγμά τι τοῖς Βοιωτάρχαις προκηρύττων ἀναφέρειν αὐτῷ τὰ μέρη τῶν λημμάτων, διώμνυτο τὴν Ἀθηνᾶν, ἣν, ὡς ἔοικε, Φειδίας ἐνεργολαβεῖν εἰργάσατο καὶ ἐνεπιορκεῖν Δημοσθένει, ἢ μὴν, εἴ τις ἐρεῖ, ὡς χρὴ πρὸς Φίλιππον εἰρήνην ποιήσασθαι, ἀπάξειν εἰς τὸ δεσμωτήριον ἐπιλαβόμενος τῶν τριχῶν, ἀπομιμούμενος τὴν Κλεοφῶντος πολιτείαν, ὃς ἐπὶ τοῦ πρὸς Λακεδαιμονίους πολέμου, ὡς λίγεται, τὴν πόλιν ἀπώλεσεν.

2. Ext. (A) (*a*) *ἐπὶ Χαιρώνδου ἄρχοντος * * * φθίνοντος*:—Give the date according to our mode of reckoning and explain the Athenian method of computing time. (*b*) Explain the geographical references of ext. (B). Is Æschines right in his estimate of their value? (*c*) Explain the following uses of the *Genitive* in ext. (C):—(*d*) (1) *τούτων ἐχόντων*. (2) *δωρωδοκίας*. (3) *λέγοντος*. (4) *λημμάτων*. (5) *τῶν τριχῶν*.

3. Write short explanatory notes on the following references:—(1) *τὸν Ἄθων διορύξας*. (2) *τὸ τοῖς μυστηρίοις σημεῖον φανέν*. (3) *πρὸ τῆς ἐπιούσης πυλαίας*· (4) *εἰς προεδρίαν καλέσας*. (5) *τὴν γραφὴν ἀλώσεται*. (6) *ἀρχὴν ὑπεύθυνον*. (7) *ἡγεμονίας δικαστηρίων*. (8) *πυλάγορι*.

4. Translate and explain the following idiomatic phrases:—(*a*) *προσέμιξε φέρων*. (*b*) *ἔλαθεν μικρὸν ἐπισχὼν ὑφελόμενος*. (*c*) *ἐκεῖνο πεπόνθατε*. (*d*) *ἐπὶ διετὲς ἠβῶσι*. (*e*) *ἦκε φερόμενος εἰς τὴν ἑαυτοῦ φύσιν*. (*e*) *τὰς εὐθύνας ὠφληκώς*.

5. Give the meaning and the derivation of:—*ἐνεργολαβεῖν, διαδικασίαν, ἐχαράκωσε, θεοβλάβειαν, ἀκαλλιερήτων, μεσεγγυήματος, ἐνοχος, κατα χειροτονίαν, προξενίας, πρυστροπήν*.

6. Parse carefully the following verbs:—*ἐνήρκται, ἀπηλλάγην, ἐχωσαν, ἀφεῖναι, ἆψαι, ἐξανηλωμένοι, πέπρανται, δῷ, ὠφληκώς*.

7. Before what court was this Oration delivered and how was it constituted? What were the strongest points made by Æchines?

8. Translate:—

(D) ΠΡ. *οὐ ταῦτα ταύτῃ μοῖρά πω τελεσφόρος*
κρᾶναι πέπρωται, μυρίαις δὲ πημοναῖς
δίαις τε καμφθεὶς ὧδε δεσμὰ φυγάνω·
τέχνῃ δ' ἀνάγκης ἀσθενεστέρα μακρῷ.
ΧΟ. *τίς οὖν ἀνάγκης ἐστὶν οἰακοστρόφος*;
ΠΡ. *Μοῖραι τρίμορφοι μνήμονές τ' Ἐρινύες*.
ΧΟ *τούτων ἄρα Ζεὺς ἐστιν ἀσθενέστερος*.
ΠΓ. *οὔκουν ἂν ἐκφύγοι γε τὴν πεπρωμένην*.
ΧΟ. *τί γὰρ πέπρωται Ζηνὶ πλὴν ἀεὶ κρατεῖν*;
ΠΡ. *τοῦτ' οὐκ ἔτ' ἂν πύθοιο μηδὲ λιπάρει*.
ΧΟ. *ἦ πού τι σεμνόν ἐστιν ὃ συναμπέχεις*.
ΠΡ. *ἄλλου λόγου μέμνησθε, τόνδε δ' οὐδαμῶς*
καιρὸς γεγωνεῖν, ἀλλὰ συγκαλυπτέος
ὅσον μάλιστα· τόνδε γὰρ σώζων ἐγὼ
δεσμοὺς ἀεικεῖς καὶ δύας ἐκφυγγάνω.

(E) *εὐθὺς δὲ μορφὴ καὶ φρένες διάστροφοι*
ἦσαν, κεραστὶς δ', ὡς ὁρᾶτ', ὀξυστόμῳ
μύωπι χρισθεὶς' ἐμμανεῖ σκιρτήματι
ἠσσον πρὸς εὔποτόν τε Κερχνείας ῥέος
ἀκτήν τε Λέρνης· βουκόλος δὲ γηγενὴς
ἄκρατος ὀργὴν Ἄργος ὠμάρτει, πυκνοῖς

ὁσσοις δεδορκὼς τοὺς ἐμοὺς καυὰ στίβους.
ἀπροσδόκητος δ' αὐτὸν ἀφνίδιος μόρος
τοῦ ζῆν ἀπεστέρησεν. οἰστροπλὴξ δ' ἐγὼ
μάστιγι θείᾳ γῆν πρὸ γῆς ἐλαύνομαι.
κλύεις τὰ πραχθέντ'. εἰ δ' ἔχεις εἰπεῖν ὅ τι
λοιπὸν πόνων, σήμαινε· μηδέ μ' οἰκτίσας
ξύνθαλπε μύθοις ψευδέσιν· νόσημα γὰρ
αἴσχιστον εἶναί φημι συνθέτους λόγους.

(F) ΠΡ. ὤπται πάλαι δὴ καὶ βεβούλευται τάδε.
ΕΡ. τόλμησον, ὦ μάταιε, τόλμησόν ποτε
πρὸς τὰς παρούσας πημονὰς ὀρθῶς φρονεῖν.
ΠΡ. ὀχλεῖς μάτην με κὐμ' ὅπως παρηγορῶν.
εἰσελθέτω σε μήποθ' ὡς ἐγὼ Διὸς
γνώμην φοβηθεὶς θηλύνους γενήσομαι
καὶ λιπαρήσω τὸν μέγα στυγούμενον
γυναικομίμοις ὑπτιάσμασιν χερῶν
λῦσαί με δεσμῶν τῶνδε· τοῦ πεπρωμένου δέως.

9. (*a*) Explain the mythological references of ext. (D). (*b*) How was the person of Io represented in this Drama? What is the point of her connection with the development of the plot?

10. (*a*) Give the approximate date of this Drama, adducing conjectural internal evidence. (*b*) Cite current proverbs and political references supposed to be in it. (*c*) Name the other Dramas which, with this, were composed by Æschylus on the legend of Prometheus. (*d*) With what school of philosophers was Æschylus said to be connected? (*e*) Enumerate the leading characteristics of his style as a poet and dramatist.

FIRST YEAR.

LATIN.—VIRGIL.—BOOK VI.

FRIDAY, APRIL 6TH:—MORNING, 9 TO 12.

Examiner, ... A. J. EATON, M.A., PH.D.

I. Translate:—

(A) Ostia iamque domus patuere ingentia centum
Sponte sua, vatisque ferunt responsa per auras:
"O tandem magnis pelagi defuncte periclis!
Sed terra graviora manent. In regna Lavini
Dardanidae venient; mitte hanc de pectore curam
Sed non et venisse volent. Bella, horrida bella,
Et Thybrim multo spumantem sanguine cerno.
Non Simois tibi nec Xanthus, nec Dorica castra
Defuerint.

(B) "Infelix Dido, verus mihi nuncius ergo
Venerat, exstinctam ferroque extrema secutam :
Funeris heu tibi causa fui ? Per sidera juro,
Per superos, et si qua fides tellure sub ima est,
Invitus, regina, tuo de litore cessi.
Sed me jussa deum, quae nunc has ire per umbras,
Per loca senta situ cogunt noctemque profundam,
Imperiis egere suis : nec credere quivi
Hunc tantum tibi me discessu ferre dolorem.
Siste gradum, teque aspectu ne subtrahe nostro.

(C) Hac vice sermonum roseis Aurora quadrigis
Iam medium aetherio cursu trajecerat axem ;
Et fors omne datum traherent per talia tempus :
Sed comes admonuit, breviterque affata Sibylla est :
"Nox ruit, Aenea ; nos flendo ducimus horas.
Hic locus est, partes ubi se via findit in ambas :
Dextera, quae Ditis magni sub moenia tendit,
Hac iter Elysium nobis : at laeva malorum
Exercet poenas, et ad impia Tartara mittit."

(D) Tum pater Anchises : "Animae, quibus altera fato
Corpora debentur, Lethaei ad fluminis undam
Securos latices et longa oblivia potant.
Has equidem memorare tibi atque ostendere coram,
Iampridem hanc prolem cupio enumerare meorum :
Quo magis Italia mecum laetere reperta.
O pater, anne aliquas ad caelum hinc ire putandum est
Sublimes animas, iterumque in tarda reverti
Corpora ? quae lucis miseris tam dira cupido ?
Dicam equidem ; nec te suspensum, nate, tenebo : "
Suscipit Anchises, atque ordine singula pandit.

II. State the principles of Syntax that explain the following forms, (*a*) in regard to tense : *patuere—ferunt, venisse, defuerint, cupio ;* (*b*) in regard to mood ; *traherent, ire, laetere ;* (*c*) in regard to case : *periclis, quadrigis, dextera, Elysium, qua, situ, aspectu, lucis.*

III. (*a*) Derivation and meaning of *ingens, senta, situ, comes, trames, moenia, nuncius, profundus, securus, inclutus, alumnus, lustro* (any ten.). How are patronymics formed ? Illustrate their formation by the following names : Anchises, Alceus, Cecrops, Priamus. (*b*) What rhetorical figure in *Sed non et venisse volent* ? (*c*) Write out and divide into feet, marking the quantity of every syllable, and the position of the caesura, the first four lines of ext. (A). (*d*) Give the principal parts of *defuncte, manent, cerno, traherent, findit, pandit.* (*e*) How are prohibitions expressed in Latin ? Illustrate.

IV. (*a*) Remark upon the following mythological characters: Briareus, Scylla, Centauri, Chimaera, Deiphobe. What were the guilt and punishment of Salmoneus? of Phlegyas?

(*b*) Enumerate briefly, as described in the sixth book, the different steps taken in the interment of the dead.

(*c*) What doctrine does Anchises proceed to explain to his son, in the passage which follows ext. (D). Briefly comment upon it.

V. Without translating, explain the reference to Roman legal procedure contained in (1), and peculiarities of grammatical construction or ambiguity of meaning in (2), (3), (4.)

(1) quaesitor Minos urnam movet; ille silentum.
conciliumque vocat vitasque et crimina discit.
(2) pars in gramineis exercent membra palaestris.
(3) et pater ipse suo superum iam signat honore.
(4) qui iuvenes! quantas ostentant, aspice, vires!

VI. Translate into Latin:—

1. In his lifetime we neglected this poet; after his death we honor him with a state funeral and a marble tomb with many beautiful monuments. 2. Was it by force of arms, or by judgment, courage, and good sense, that Rome was able to dictate terms to the rest of the world? 3. We ought long ago to have listened to the teachings of so great a philosopher as this. 4. On my asking what I was to do, whether and how and when I had offended him, he made no reply. 5. It is said that the king himself was the only one of the whole of his army to ride in safety past the fatal marsh, and the first to reach the foot of the mountains, whence on the next day he reluctantly led back his troops and never again ventured to form such high hopes or embark on (moliri) such great enterprises.

INTERMEDIATE EXAMINATION.

LATIN.—HORACE—EPISTLES, BOOK. I.

FRIDAY, APRIL 6TH:—MORNING, 9 TO 12.

Examiners, ... } REV. GEORGE WEIR, LL.D.
} A. J. EATON, M.A., PH.D.

1. Translate:—

(A) Cras nato Caesare festus
dat veniam somnumque dies; impune licebi
aestivam sermone benigno tendere noctem.
Quo mihi fortunam, si non conceditur uti?
Parcus ob heredis curam nimiumque severus
adsidet insano. Potare et spargere flores
incipiam patiarque vel inconsultus haberi.

(B) Quem simul adspexit scabrum inonsumque Philippus,
'Durus,' ait, 'Voltei, nimis attentusque videris
esse mihi.' 'Pol, me miserum, patrone, vocares,
si velles', inquit, 'verum mihi ponere nomen.
Quod te per Genium dextramque Deosque Penatis
obsecro et obtestor, vitae me redde priori.'

(C) Laetus sorte tua vives sapienter, Aristi,
nec me dimittes incastigatum, ubi plura
cogere quam satis est ac non cessare videbor.
Imperat aut servit collecta pecunia cuique,
tortum digna sequi potius quam ducere funem.
Haec tibi dictabam post fanum putre Vacunae,
excepto quod non simul esses, cetera laetus.

(D) Omnis Aristippum decuit color et status et res,
temptantem maiora, fere praesentibus aequum.
Contra, quem duplici panno patientia velat,
mirabor, vitae via si conversa decebit.
Alter purpureum non exspectabit amictum,
quidlibet indutus celeberrima per loca vadet,
personamque feret non inconcinnus utramque:
alter Mileti textam cane peius et angui
vitabit chlamydem: morietur frigore si non
rettuleris pannum. Refer et sine vivat ineptus.

(E) Alter in obsequium plus aequo pronus, et imi
derisor lecti, sic nutum divitis horret,
sic iterat voces et verba cadentia tollit,
ut puerum saevo credas dictata magistro
reddere vel partis mimum tractare secundas.
Alter rixatur de lana saepe caprina,
propugnat nugis armatus: "Scilicet ut non
sit mihi prima fides, et vere quod placet ut non
acriter elatrem! Pretium aetas altera sordet."
Ambigitur quid enim? Castor sciat an Docilis plus;
Brundisium Minuci melius via ducat an Appi.

2. Explain fully the grammatical construction of (*a*) inconsultus, (*b*) haberi, (*c*) velles (mood and tense), (*d*) excepto, (*e*) cetera, (*f*) quod (Ext. B), (*g*) praesentibus, (*h*) Mileti, (*i*) vivat, (*k*) magistro, (*l*) pretium.

3. (*a*) What mood does Horace use with *quamvis*, and what is the usage of other classical authors?

(*b*) In proper names, what form does he generally adopt in his epistles?

(*c*) Account for the case of *fortunam* (Ext. A.): other readings are *fortuna* and *fortunae*: discuss the construction of the word in each of these readings, noting the requirements of the metre and sense.

4. Write explanatory notes on the following: (1) Donatum jam rude. (2) Nullius addictus jurare in verba magistri. (3) Magna coronari contemnat Olympia. (4) Ianus summus ab imo. (5) Locus est et pluribus umbris. (6) Rex Paterque audisti coram. (7) Nato Caesare (Ext. A.). (8) Per Genium (Ext. B. (9) Imi derisor lecti (Ext. E).

5. Without translating, discuss grammatical peculiarities:

(*a*) Nos numerus sumus et fruges consumere nati,
sponsi Penelopae nebulones Alcinoique.

(*b*) Vir bonus et sapiens dignis ait esse paratus.

(*c*) Non domus et fundus, non aeris acervus et auri
Aegroto domini deduxit corpore febris,
non animo curas; valeat possessor oportet,
si comportatis rebus bene cogitat uti.

(*d*) Iactamus jam pridem omnis te Roma beatum;
sed vereor ne cui de te plus quam tibi credas,
neve putes alium sapiente bonoque beatum.

6. State (1) the distinction between hypothetical or conditional sentences with the indicative and with the subjunctive mood respectively, (2) the changes that take place when direct narration is changed into the indirect form, and (3) the various constructions of relative clauses in the use of the indicative or subjunctive.

7. (*a*) Explain briefly the relation to the context of extracts (A), (B) and (D.

(*b*) Write brief notes upon the following philosophers and the schools of philosophy to which they belonged: Aristippus, Empedocles, Epicurus Democritus.

8. (*a*) Write a brief sketch of Horace's life. (*b*) Give an enumeration of his writings, and treat especially of the matter and style of his epistles. (*c*) Write out an analysis of any one of them.

INTERMEDIATE EXAMINATION.

LATIN PROSE COMPOSITION.

FRIDAY, APRIL 6TH:—AFTERNOON, 2 TO 5.

Examiners,..... } REV. GEORGE WEIR, LL.D.
} A. J. EATON, M.A., PH. D.

(A) After Litavicus had received the command of the army, and when he was about thirty miles distant from Gergovia, suddenly calling the troops together, in tears he addressed them: "Whither, fellow soldiers, are we going? All our cavalry, all our nobility are slain. The foremost men of the state, being accused by the Romans of treason, are put to death without trial. Learn these things of those who have escaped this general massacre; for as to me, now that my brothers and all my kinsmen are slain, grief restrains me from announcing these acts." He then pro-

duced some whom he had beforehand instructed as to what they should say, and who, joining in the same story, told the multitude that the greater part of the Aeduan cavalry had been put to the sword.

(B) Ennius, who had been called the father of Latin poetry, not that he was actually the oldest, but because he was the first that attained to any elegance in writing, was born at Rudiae, a small town of Calabria, in the second year of the 135th Olympiad, which corresponds with the year of Rome 514. Who his parents were, or how he spent his early years, is altogether unknown. The first notice we have of him is as a centurion in the second Punic war; in which capacity his reputation stands higher than that of certain other poets; for he conducted himself so as to meet with the entire approbation of Scipio, under whose command he is well known to have served, and has been well spoken of by Silius Italicus and others.

THIRD YEAR.

LATIN.—LIVY.—BOOK XXI.

FRIDAY, APRIL 6TH.—MORNING, 9 TO 12.

Examiner,..... REV. DR. CORNISH.

1. Translate :—

(A) Carthagini nunc Hannibal vineas turresque admovet, Carthaginis mœnia quatit ariete: Sagunti ruinæ—falsus utinam vates sim—nostris capitibus incident, susceptumque cum Saguntinis bellum habendum cum Romanis est. dedemus ergo Hannibalem? dicet aliquis. scio meam levem esse in eo auctoritatem propter paternas inimicitias; sed et Hamilcarem eo perisse lætatus sum, quod, si ille viveret, bellum iam haberemus cum Romanis, et hunc iuvenem tamquam furiam facemque huius belli odi ac detestor; nec dedendum solum ad piaculum rupti fœderis, sed, si nemo deposcit, devehendum in ultimas maris terrarumque oras, ablegandum eo, unde nec ad nos nomen famaque eius accedere neque ille sollicitare quietæ civitatis statum possit. ego ita censeo, legatos extemplo Romam mittendos, qui senatui satisfaciant, alios, qui Hannibali nuntient, ut exercitum ab Sagunto abducat, ipsumque Hannibalem ex fœdere Romanis dedant; tertiam legationem ad res Saguntinis reddendas decerno.

(B) Fingerent altiores Pyrenæi iugis: nullas profecto terras cælum contingere nec inexsuperabilis humano generi esse: Alpis quidem habitari, coli gignere atque alere animantes; pervias paucis esse, *pervias* exercitibus. eos ipsos, quos cernant, legatos non pinnis sublime elatos Alpis transgressos. ne maiores quidem eorum indigenas, sed advenas Italiæ cultores has ipsas Alpis ingentibus sæpe agminibus cum liberis ac coniugibus migrantium modo tuto transmisisse. militi quidem armato nihil secum præter instrumenta belli portanti quid invium aut inexsuperabile esse? Saguntum ut caperetur, quid per octo menses periculi, quid laboris exhaustum esse? Romam, caput orbis terrarum, petentibus quicquam adeo as-

perum atque arduum videri, quod inceptum moreteur? cepisse quondam Gallos ea, quæ adiri posse Pœnus desperet : proinde aut cederent animo atque virtute genti per eos dies totiens ab se victæ, aut itineris finem sperent campum interiacentem Tiberi ac mœnibus Romanis.

(C) Legati Romani ab Carthagine, sicut iis Romæ imperatum erat, in Hispaniam, ut adirent civitates, ut in societatem perlicerent aut averterent a Pœnis, traiecerunt. ad Bargusios primum venerunt, a quibus benigne excepti, quia tædebat imperii Punici, multos trans Hiberum populos ad cupidinem novæ fortunæ erexerunt. ad Volcianos inde est ventum, quorum celebre per Hispaniam responsum ceteros populos ab societate Romana avertit. ita enim maximus natu ex iis in concilo respondit: "quæ verecundia est, Romani, postulare vos, uti vestram Carthaginiensium amicitiæ præponamus, cum qui id fecerunt Saguntini crudelius quam Pœnus hostis perdidit, vos socii prodideritis? ibi quæratis socios censeo, ubi Saguntina clades ignota est: Hispanis populis sicut lugubre, ita insigne documentum. Sagunti ruinæ erunt, ne quis fidei Romanæ aut societati confidat." inde extemplo abire finibus Volcianorum iussi ab nullo deinde concilio Hispaniæ benigniora verba tulere· ita nequiquam peragrata Hispania in Galliam transeunt.

2. Carefully translate, and show the grammatical construction of the following extracts :—(*a*) Et haud ignotas belli artes inter sese, sed expertas primo Punico conserebant bello, et adeo varia fortuna belli ancepsque Mars fuit, ut propius periculum fuerint, qui vicerunt. (*b*) Id quod gerendis rebus superesset, quieti datum. (*c*) Sed ut locus procul muro satis æquus agendis vineis fuit, ita haudquaquam prospere, postquam ad effectum operis ventum est, cœptis succedebat. (*d*) Cujus ita aliqua spes essi eam quemadmodum ut victor fert Hannibal, sic vos ut victi audietis; si non id quod amittitur in damno, cum omnia victoris sint, sed quicquid relinquitur pro munere habituri estis.

3. State the difference in meaning between :—res relata ad senatum and res delata ad senatum ; agmen, exercitus, acies ; mœnia, murus ; obsidio, oppugnatio ; pugna, prœlium ; opportunitas, occasio ; campus, ager ; vires, robur ; tumultus, bellum ; potestas, potentia ; ripa, ora, littus.

4. Parse the following verbs, giving the principal parts of each :—Cautum erat, prodideritis, icta, excitos, ratus, collatis, dispositis, passi sitis, ulti, fusum, hæsisset, conserto.

5· Give the meaning and derivation of :—Mobilis, provincia, indigenas, integro, pedetentim, anceps, actuariis, præda, infesto, concio, celebre, cæmenta, celoces, sagulo.

6. Turn the following into *Orat. Oblig.*—"Hic vobis bellum et pacem portamus: utrum placet sumite." And the following into *Orat. recta* :—"Daret utrum vellet; et cum is * * * bellum dare dixisset; accipere se * * et quibus acciperent animis, iisdem se gesturos."

7. Define the geographical position, giving modern names where you can

of:—Zacynthus, Saguntum, Carthago, Carthago nova, Aegates, Ticinus, Sardos Corsosque et Istros.

8. Turn into Latin:—

Alexander the Great, as he was returning to Babylon, was met by certain Chaldæan prophets who warned him not to enter the city; for, if he went, his life would be in danger. We know, however, that, despising their counsel, he proceeded on his way, being informed that ambassadors, from all parts of the world had crowded to Babylon, and were waiting his arrival. A few days after he reached the city, he was invited to a feast by Thessalus, a physician; and it is said that he died in consequence of poison given him at that entertainment. A little before his death, when his voice had now begun to fail, his friends asking him to whom he left his kingdom, he replied "to the bravest."

B.A. ORDINARY EXAMINATION.

FRIDAY, APRIL 6TH:—MORNING, 9 TO 12.

LATIN.—{ TACITUS.—ANNALS, BOOK I.
{ JUVENAL.—SATIRES, VIII. & XIII.

Examiner,.....REV. GEORGE CORNISH, LL.D.

1. Translate:—

(A) Nam senem Augustum devinxerat adeo, uti nepotem unicum, Agrippam Postumum, in insulam Planasiam proiecerit, rudem sane bonarum artium et robore corporis stolide ferocem, nullius tamen flagitii conpertum. At hercule Germanicum Druso ortum octo apud Rhenum legionibus inposuit adscirique per adoptionem a Tiberio iussit, quamquam esset in domo Tiberii filius iuvenis, sed quo pluribus munimentis insisteret. Bellum ea tempestate nullum nisi adversus Germanos supererat, abolendae magis infamiae ob amissum cum Quintilio Varo exercitum quam cupidine proferendi imperii aut dignum ob praemium. Domi res tranquillae, eadem magistratuum vocabula; iuniores post Actiacam victoriam, etiam senes plerique inter bella civium nati: quotus quisque reliquus qui rem publican vidisset?

(B) Pervaserat interim circumventi exercitus fama et infesto Germanorum agmine Gallias peti; ac ni Agrippina inpositum Rheno pontem solvi prohibuisset, erant qui id flagitium formidine auderent. sed femina ingens animi munia ducis per eos dies induit, militibusque, ut quis inops aut saucius, vestem et fomenta dilargita est. tradit C. Plinius, Germanicorum bellorum scriptor, stetisse apud principium pontis, laudes et grates reversis legionibus habentem. id Tiberii animum altius penetravit. non enim simplices eas curas, nec adversus externos *studia* militum quaeri, nihil relictum imperatoribus, ubi femina manipulos intervisat, signa adeat. largitionem temptet, tamquam parum ambitiose filium ducis gregali habitu circumferat Caesaremque Caligulam appellari velit. potiorem iam apud

exercitus Agrippinam quam legatos, quam duces; conpressam a muliere seditionem, cui nomen principis obsistere non quiverit. accendebat haec onerabatque Seianus, peritia morum Tiberii odia in longum iacens, quae reconderet auctaque promeret.

(C) At Romae nondum cognito qui fuisset exitus in Illyrico, et legionum Germanicarum motu audito, trepida civitas incusare Tiberium, quod, dum patres et plebem, invalida et inermia, cunctatione ficta ludificetur, dissideat interim miles neque duorum adulescentium nondum adulta auctoritate comprimi queat. ire ipsum et opponere maiestatem imperatoriam debuisse cessuris, ubi principem longa experientia eundemque severitatis et munificentiae summum vidissent. an Augustum fessa aetate totiens in Germanias commeare potuisse: Tiberium vigentem annis sedere in senatu, verba patrum cavillantem? satis prospectum urbanae servituti: militaribus animis adhibenda fomenta, ut ferre pacem velint.

2. Ext. (A) (1) *Devinxerat*:—Give the name of the subject of this verb. (2) Ob amissum cum Quintitio Varo exercitum. Eadem magistratuum vocabula. Past Actiacam victoriam:—Write short explanatory notes on these, giving dates. Ext. (B) (3) Impositum Rheno pontem:—What localities have been suggested? (4) Laudes et grates habentem:—Note the peculiar word here. (5) Accendebat haec * * * auctaque promeret: Construe carefully this sentence. Ext. (C) (6) Tiberium vigentem annis:—What was his age?

3. Point out some prominent characteristics of the syntax and style of Tacitus, adducing illustrations from the extracts given for translation.

4. Write explanatory notes (grammatical), of the following:—(*a*) Illis *illic)* etiam honestæ mortis usus, his inglorium exitium. (2) Postquam haesere munimentis. (3) Temporis ac necessitatis monet. (4) Primum extruendo tumulo caespitem Cæsar posuit, gratissimo munere in defunctos et praesentibus doloris socius. (5) Pergere ad Treveros et externae fidei. (6) Manus intentantes, causam discordiae et initium armorum.

5. Derive and explain the meaning of:—postestas, potentia, dominatio, excubiae, cohortes, legio, pontifices, manipuli, municipium, vexillum, vexilarii, porta decumana.

6. Give a short account of the writings of Tacitus. In what order were they written? What are their merits?

7. Translate:—

(D) Libera si dentur populo suffragia, quis tam
Perditus, ut dubitet Senecam præferre Neroni;
Cujus supplicio non debuit una parari
Simia, nec serpens unus, nec culeus unus?
Par Agamemnonidæ crimen; sed causa facit rem
Dissimilem. Quippe ille Deis auctoribus ultor
Patris erat cæsi media inter pocula: sed nec
Electræ jugulo se polluit aut Spartani

Sanguine conjugii; nullis aconita propinquis
Miscuit, in scena nunquam cantavit Orestes,
Troica non scripsit. Quid enim Verginius armis
Debuit ulcisci magis, aut cum Vindice Galba?
Quid Nero tam sæva crudaque tyrannide fecit?
Hæc opera atque hæ sunt generosi Principis artes,
Gaudentis fœdo peregrina ad pulpita cantu
Prostitui, Graiæque apium meruisse coronæ.

(E Hi sunt, qui trepidant et ad omnia fulgura pallent,
Quum tonat, exanimes primo quoque murmure cœli;
Non quasi fortuitus, nec ventorum rabie, sed
Iratus cadat in terras et judicet ignis.
Illa nihil nocuit, cura graviore timetur
Proxima tempestas, velut hoc dilata sereno.
Præterea, lateris vigili cum febre dolorem
Si cœpere pati, missum ad sua corpora morbum
Infesto credunt a numine; saxa Deorum
Hæc et tela putant. Pecudem spondere sacello
Balantem et laribus cristam promittere galli
Non audent: quid enim sperare nocentibus ægris
Concessum? vel quæ non dignior hostia vita?

8. (*a*) What political event is supposed to be referred to in vs. 1 of ext. (D)? (*b*) Give a short account of Seneca. (*c*) Write short explanatory notes on the legendary and historical personages referred to in that extract.

9. What is the subject of Sat. XIII., and how is it treated by Juvenal? What estimate may be formed, from their writings, of the moral and political opinions of Tacitus and Juvenal?

10. (*a*) Distinguish between:—Odi hominem qui hoc *fecit*. and odi hominem qui hoc *fecerit*. (*b*) Explain the constructions:—(1) Permagni nostra interest. (2) Quod parato est opus, para. (3) Ceteri, vicem pecudum caesi sunt. (*c*) Distinguish between the use of *Donec* with the Indicative and with the Subjunctive.

B. A. ORDINARY EXAMINATION.

GREEK AND ROMAN HISTORY AND LATIN PROSE COMPOSITION.

MONDAY, APRIL 16TH:—AFTERNOON, 2 TO 5.

Examiner,.....REV. GEORGE CORNISH, LL D.

(N.B.—*Candidates taking both Greek and Latin may omit any two of the questions in groups* (A) *and* (B) *severally*).

(A) *The Peloponnesian War.*

1. Write a sketch of the character and policy of Pericles, and show in what respects his death was a public calamity to the Athenians.

2. Describe the general military operations and policy of the Lacedaemonians in the conduct of the war.

3. Give an account of the constitution and powers of the Ecclesia at Athens, and show how it favoured Demagogism.

4. What may be regarded as the turning point of the war, and why?

5. Write a note on the policy of Persia in relation to the war, and also on the character and political influence of Alcibiades.

(B) *The Twelve Cæsars.*

1. Note the steps by which Octavius gained supreme power, and describe the general policy and administration, domestic and foreign.

2. Describe the character of Tiberius as represented by Tacitus. Is it an impartial characterization?

3. Name, giving dates, and describe generally, the three successors of Tiberius.

4. One year saw four Emperors successively on the throne;—name the year and the Emperors.

5. A short account of the Emperors of the Flavian house.

(C) Translate into Latin:—

But the consuls, being suspected by the plebeians, were unable to raise an army. And so they sent ambassadors to the Volsci to ask what their demands were. And to them Coriolanus answered that they must restore their lands and towns to the Volsci, and receive them into their friendship by a treaty equal to that with the Latins. Then they sent the priests, pontiffs, and augurs, to beseech him to grant them fair terms of peace. And they, having been received with honour, departed nevertheless without success. Then his mother and the ladies of Rome determined to try what they could do with him. And when they had come to the camp, and had been brought to him, his mother asked whether he was to her C. Marcius or the general of the Volscians. Was it to her alone that the ruin of her country was owed? She indeed was too old to live long. But let him consider his wife and children, who must be enslaved with their country. And Coriolanus, moved by these complaints, exclaimed that his mother had saved Rome, but had lost her son. Then he led away the army, on the ground that the city was too strong to be taken.

FIRST YEAR.

GREEK AND ROMAN HISTORY.

FRIDAY, APRIL 6TH:—AFTERNOON, 2 TO 5.

Examiner,.....A. J. EATON, M.A., PH.D.

1. Relate the legend of Theseus.

2. What was the most celebrated Grecian oracle? Give a detailed account.

3. State briefly what you know of Appius Claudius Caecus, Fabius Maximus, Manlius Torquatus, Decius Mus, Aristides, Leonidas and Alcibiades.

4. Give the Geographical position of, and state (with dates) what occurred at, Salamis, Mycale, Mantinea, Ægos-potami, Caudine Forks, Heraclea and Cannae.

5. Explain the duties of a Dictator, Consul, Praetor and Quaestor.

6. What public and private rights did a Roman enjoy, and to what extent were these granted to foreigners?

7. Give an account of the Spartan constitution and system of education as developed by Lycurgus.

8. Write on the following subjects: (*a*) Numa Pompilius and the works attributed to him; (*b*) The Roman government, as established in the Italian communities); c) The Campaigns of Pyrrhus.

THIRD YEAR EXAMINATION FOR HONOURS IN CLASSICS.

I. GREEK

MONDAY, APRIL 23RD:—MORNING, 9 TO 12.

Examiner,..... .....REV. GEORGE CORNISH, LL.D.

1. Translate (with an explanatory note when you deem it necessary):—

(A) Æschylus, Prometheus Vinctus, vss. 536–560.

2. (*a*) Comment on the beauty and appropriateness of the stasimon from which ext. (A) is taken. (*b*) Construe vss. 555–560. Show the composition and meaning of the following words as illustrations of the use of compounds by Æschylus:—*λεωργόν, αἱπυμήτα, χειρωναξία, ἀνήριθμον, ἀδήριτον, ναρθηκοπλήρωτου, προσπορπατός, πεδαρσίοις, ποικιλείμων, πετρηρεφῆ*. (*d*) vs. 74:—*σχεθεῖν* or *σχέθειν*? vs. 17.—*εὐωριάζειν* or *ἐξωριαζειι*? vs. 28:—*ἐπηύρω, ἐπηύρου*, or *ἀπηύρω*? Comment on these variants.

3. Translate:—

(B) Sophocles, Antigone, vss. 955–987.

4. (*a*) Analyse the metres of, and scan, strophe *β* (966–76) in ext. (B). (*b*) Construe carefully the same strophe, discussing the meaning of *παρὰ* (Mss.), *πάρα* (Jelf, suggestion), *πὰρ* (Wunder, conj.). (*c*) Write notes on the legendary references of ext. (B). (*d*) What is the theme of this Drama, and how is it worked out? Characterise the use of the Chorus in this Drama in the development of the action. (*e*) Mention peculiarities of style or of construction found in Sophocles.

5. Write explanatory notes on :—(*a*) *κοινὸν αὐτάδελφον* Ἰσμήνης *κάρα.* (*b*) vs. 40 :—*τῶν ἐχθρῶν κακά.* (*c*) vs. 74 :—*ὅσια πανουργήσασα.* (*d*) vs. 150 :—Ἄρης *δεξιόσειρος.* (*e*) vs. 411 :—*καθήμεθ' ἄκρων ἐκ πάγων.* (*f*) vss. 599-602 :—*νῦν γὰρ κ. τ. λ.* (*g*) vs. 1011 :—*μηροὶ καλυπτῆς κ. τ. λ.*

6. Translate :—

(C) Theocritus, Idyll VI. vss. 1–20.

7. Give the Attic equivalents of the following forms :—*νάσω, νίκη, ἐνθων, ἴσαμι, τὼς κανθαρος, δήλετο, ὑφίητι, ὦπερ, θᾶσαι, ἐμίν, τυ, ἀείδες, ἀειδες, τέ.* (*b*) Resolve the following crases :—*ὠξ, τωὐβούλοιο, κεἶφ, κἠπεί, χὤς, κἦμ', ὄκχ', χἀμῖν.* (*c*) The age and characteristics of the poetry of Theocritus.

8. Translate :—

(D) Aristotle, de Poetica, Chap. 10, and Chap. 24, down to *τιθεμένων παρήκοιεν.*

9. (*a*) Illustrate Chap. 10 by references to extant Greek dramas. (*b*) Write a note on *πρὸς τὸ πλῆθος τῶν τραγωδιῶν κ. π. λ.* (*c*) *τὸ μεταβάλλειν τὸν ἀκούοντα. τὸ γὰρ ὅμοιον ταχὺ πληροῦν ἐκπίπτειν ποιεῖ τὰς τραγωδίας. τὸ δὲ ἰαμβεῖον καὶ τετράμετρον κινητικά, καὶ τὸ μὲν ὀρχηστικὸν τὸ δὲ πρακτικόν* :—translate and comment on these extracts. (*d*) How would you account for the defective and incomplete state of this Treatise?

10. (*a*) The place and function of the Chorus in the Greek Drama, and the phases through which it passed in Tragedy. (*b*) Compare the three great Attic Dramatists in their use of the Chorus.

11. (*a*) Account for the difference between the dialect of the Chorus and that of the dialogue in Greek Tragedy. (*b*) Write down a list of Ionic words found in the Attic Dramatists. How may their presence be accounted for?

12. Translate :—

Ὡς δὲ Δαρεῖος ἐπῆγεν ἤδη τὴν φάλαγγα πᾶσαν, ἐνταῦθα Ἀλέξανδρος Ἀρέτην μὲν κελεύει ἐμβαλεῖν τοῖς περιϊππεύουσι τὸ κέρας σφῶν τὸ δεξιὸν ὡς ἐς κύκλωσιν· αὐτὸς δὲ τέως μὲν ἐπὶ κέρως τοὺς ἀμφ' αὐτὸν ἦγε· τῶν δὲ ἐκβοηθησάντων ἱππέων τοῖς κυκλομένοις τὸ κέρας τὸ δεξιὸν παραρρηξάντων τι τῆς πρώτης φάλαγγος τῶν βαρβάρων ἐπιστρέψας κατὰ τὸ διέχον καὶ ὥσπερ ἔμβολον ποιήσας τῆς τε ἵππου τῆς ἑταιρικῆς καὶ τῆς φάλαγγος τῆς ταύτη τεταγμένης ἦγε δρόμῳ τε καὶ ἀλαλαγμῷ ὡς ἐπὶ αὐτὸν Δαρεῖον. καὶ χρόνον μέν τινα ὀλίγον ἐν χερσὶν ἡ μάχη ἐγένετο· ὡς δὲ οἱ τε ἱππεῖς οἱ ἀμφ' Ἀλέξανδρον καὶ αὐτὸς Ἀλέξανδρος εὐρώστως ἐνέκειντο ὠθισμοῖς τε χρώμενοι καὶ τοῖς ξυστοῖς τὰ πρόσωπα τῶν Περσῶν κόπτοντες, ἥ τε φάλαγξ ἡ Μακεδονικὴ πυκνὴ καὶ ταῖς σαρίσαις πεφρικυῖα ἐμβεβλήκει ἤδη αὐτοῖς, καὶ πάντα ὁμοῦ τὰ δεινὰ καὶ πάλαι ἤδη φοβερῷ ὄντι Δαρείῳ ἐφαίνετο, πρῶτος αὐτὸς ἐπιστρέψας ἐφευγεν.

THIRD YEAR EXAMINATION FOR HONOURS.

II. LATIN.

TUESDAY, APRIL 24TH:—MORNING, 9 TO 12.

Examiner,.....REV. GEORGE CORNISH, LL.D.

1. Translate the following extracts into English, adding a brief comment where any peculiar form or construction seems to you to require it:—

(A) Tacitus, Annals, Bk. I., Chap. 74.

2. (*a*) Majestatis postulavit:—Comment on the grammatical usage, and write a note on the Lex majestatis. (*b*) Qui formam:—What is the antecedent to qui? (*c*) Miseriæ * * et audaciæ:—Is Tacitus peculiar in this use of the plurals of abstract nouns? (*d*) Sævitiæ principis adrepit:—Note the construction. (*e*) Quo loco censebis?:—What was the usual, custom in voting? (*f*) Ad reciperatores itum est:—Explain.

3. Point out some prominent characteristics of the syntax and style o Tacitus, adducing illustrations from the extracts given for translation.

4. Write explanatory notes (grammatical), of the following:—(*a*) Illis (*illic*) etiam honestæ mortis usus, his inglorium exitium. (2) Postquam hæsere munimentis. (3) Temporis ac necessitatis monet. (4) Primum extruendo tumulo cæspitem Cæsar posuit, gratissimo munere in defunctos et praesentibus doloris socius. (5) Pergere ad Treveros et externae fidei. (6) Manus intentantes, causam discordiae et initium armorum.

5. Derive and explain the meaning of:—potestas, potentia, dominatio excubiae, cohortes, legio, pontifices, manipuli, municipium, vexillum, vexilarii, porta decumana

6. Give a short account of the writings of Tacitus. In what order were they written? What are their merits?

7. Translate:—

(B) Livy, Book XXI., Chap. 62.

8. (*a*) How does the above ext. illustrate the characteristic features of the religion and worship of Rome. (*b*) Trace the route of Hannibal from Spain into Italy. (*c*) Contrast the style of Livy with that of Tacitus. Which is the more trustworthy historian?

9. Translate:—

(C) Juvenal, Sat. x, vss. 133—146.

10. Heinrich condemned vss. 146, 187, and many others, on the ground of their not being necessary to complete the sense:—show rather in what respects such vss. are in keeping with the general style and scope of Juvenal. (*b*) What defects of style are exemplified in this satire? (*c*) Explain:—(1) Pila, cohortes, egregios equites et castra domestica. (2) Totis Quinquatribus. (3) Gabiorum potestas. (4) Si Nurtia Tusco favisset.

11. Translate from Sat. viii. the following extracts, adding an explanatory note on various readings, grammatical construction, historical references, or social usages, as you may think necessary :—

(*a*) vss. 6-9. (*b*) vss. 48-50. (*c*) vss. 96-97. (*d*) vss. 140-141. (*e*) vss. 232-234. (*f*) vss. 240-243.

12. Translate :—

(D) Plautus, Aulularia, Act. ii., sc. 2, vss. 9-29.

13. (*a*) Name the metre of ext. (D) and write down the scheme, pointing out in what respects it differs from the corresponding metre of Greek Comedy. (*b*) Scan the first three vss. (*c*) What etymologies of such forms as *mecastor*, *edepol*, *mehercle*, and *equidem* have been suggested? (*d*) What inferences may be drawn from the linguistic peculiarities of Plautus as to the state of the Latin tongue in his day? (*e*) On what grounds is Plautus held to be superior to Terence as a dramatist?

14. Translate :—

(F) Erat Miseni classemque imperio praesens regebat. Nonum Kal. Septembres hora fere septima mater mea indicat ei apparere nubem inusitata et magnitudine et specie. Usus ille sole, mox frigida, gustaverat iacens studebatque : poscit soleas, ascendit locum ex quo maxime miraculum illud conspici poterat. Nubes, incertum procul intuentibus ex quo monte (Vesuvium fuisse postea cognitum est), oriebatur, cuius similitudinem et formam non alia magis arbor quam pinus expresserit. Nam longissimo velut trunco elata in altum quibusdam ramis diffundebatur, credo, quia recenti spiritu evecta, dein senescente eo destituta aut etiam pondere suo victa in latitudinem vanescebat : candida interdum, interdum sordida et maculosa, prout terram cineremve sustulerat. Magnum propiusque noscendum, ut eruditissimo viro, visum. Iubet liburnicam aptari.

THIRD YEAR EXAMINATION FOR HONOURS IN CLASSICS.

III. GREEK AND LATIN PROSE COMPOSITION.

MONDAY, APRIL 23RD :—AFTERNOON, 2 TO 5.

Examiner,..... .REV. GEORGE CORNISH, LL.D.

(A) Translate into Greek :—

1. The general said that had it not been for the valour of his men the battle would have been lost and the city captured ; and that he was happy both in other respects and in having such good soldiers. 2. If the Athenians had not quickly gone to their assistance in the storm, the ships would have been lost crews and all. 3. So long as the treaty shall last, they replied that they would observe the conditions of the peace and seek to promote the benefit of the states. 4. He was entrusted with the business of the commonwealth when a young man, and he managed it faithand successfully for very many years.

(B) Translate into Latin :—

The struggle opens with the debt question. We must realize all along how the internal history is affected by the wars without. The debtors fall into their difficulties through serving in the field during the summer; for of course the army is a citizen army, and the citizens are agriculturists. Two patrician families take the side of the poor, the Horatii and the Valerii. Manius Valerius Publicola, created dictator, promises the distressed farmers that if they will follow him in his campaign against the Sabines, he will procure the relaxation of their burdens. They go, and they return victorious. But Appius Claudius (whose family had but recently migrated to Rome, a proud and overbearing Sabine stock) opposed the redemption of the dictator's promise. The victorious host, forming a seventh of the arm-bearing population, instantly marched out of the gate of the city, crossed the river Anio, and took up a station on the Sacred Mount. They did not mean to go back again; they were weary of their haughty masters. We see the two popular patricians, M'. Valerius and Menenius Agrippa, sent by the Senate to plead with them. At last a peace is made—a formal peace concluded by the fetiales: they ollw ɹɐmc back if they may have magistrates of their own. This is the origin of the tribunes of the plebs. Each party invoked a curse on itself and its descendants if it should break the treaty. Next year the first tribunes were elected.

THIRD YEAR EXAMINATION FOR HONOURS IN CLASSICS.

IV. HISTORY OF GREECE AND ROME.

TUESDAY, APRIL 24TH :—AFTERNOON, 2 TO 5.

Examiner,..... .....REV. GEORGE CORNISH, LL.D

1. (*a*) The legend of Deukalion, Hellen, and the sons of Hellen. (*b*) Give the substance of Grote's remarks on Grecian Mythology. (*c*) What was the original meaning of the word *mythus?*

2. An account of the Pelasgi. What are Grote's views respecting them?

3. Discuss the causes of the early superiority of the Ionic Colonies in Asia Minor over the Mother country in poetical, philosophical, and historical literature.

4. (*a*) Distinguish between the character and objects of Greek and Roman colonization. (*b*) Enumerate the Western colonies of Greece. (*c*) Distinguish between the *Phocenses* and the *Phocœenses*.

5. (*a*) An account of the legislation of Lycurgus. (*b*) Distinguish between the Σπαρτιῆται, the Περίοικοι, the Εἵλωτες, the Νεοαμώδες, and the Μόθωνες, under the government of Sparta.

6. (*a*) What character did the Greeks attach to the word τύραννος? (*b*) Specify the principal Despotisms established in Greece.

7. Mommsen maintains that no legends, such as were woven around the conquest of Ilion, gathered around celebrated names, and thus Italy remained without national poetry or art. Niebular says :—"The Romans before the introduction of Greek literature possessed national epic poems, which * * * leave everything produced by the Romans in later times far behind them." Which of these two statements is the more probable? What arguments are advanced for the latter?

8. Describe, either by a map or by words, the physical features and ancient political divisions of Italy.

9. The constitution and functions of the Comitia: (*a*) *Curiata*, (*b*) *Centuriata*, and (*c*) *Tributa*, severally, under the Republic.

10. How was the Senate constituted, and what part did it take in the administration of the State?

11. Enumerate the laws passed between 500 and 300, B.C., by which the Plebeians secured political equality with the Patricians.

12. Give an historical sketch of the Samnites. What peoples of Italy combined with them in their resistance to the Romans?

B. A. EXAMINATIONS FOR HONOURS IN CLASSICS.

I. GREEK POETS.

MONDAY, APRIL 23RD MORNING, 9 TO 12.

Examiner.....REV. GEORGE CORNISH, LL.D.

1. Translate (with an explanatory note when you deem it necessary) :—

(A) Æschylus, Prometheus Vinctus, vss. 537–560.

(B) Æschylus, Seven against Thebes vss. 287–303.

2. (*a*) Comment on the beauty and appropriateness of the stasimon from which ext. (A) is taken. (*b*) Construe vss. 555–560.

3. (*a*) Analyse the metres of ext. (B) (5) κάρζας :—what dialect? (*c*) Give the meaning of the following epithets :—Ἐβδομαγέτης, Ἀλεξητήριος, Λύκειος, Ὄγκα, Νήισταισι, Χάλυβος. (*d*) To what extent is the plot of the Antigone suggested by Æschylus in this play?

4. Translate :—

(C) Sophocles, Antigone, vss. 055–987.

5. (*a*) Analyze the metres of, and scan, strophe β (966–76) in ext. (C). (*b*) Construe carefully the same strophe, discussing the meaning of παρὰ (Mss.), πάρα (Jelf, suggestion), πάρ (Wunder, conj.). (*c*) Write notes on the legendary referrences of ext. (C). (*d*) What is the theme of the Drama, and how is it worked out? Characterise the use

of the Chorus in this Drama in the development of the action. (*e*) Mention peculiarities of style or of construction found in Sophocles.

6. Translate :—

(D) Euripides, Medea, vss.—824-855.

7. Name the metre and scan strophe B in ext. (D). (*b*) What is the connection of this ode with the main action of the Drama? (*c*) What was the criticism of Aristophanes on the use of the Choral parts by Euripides? (*d*) Write explanatory notes on :—*Ἐρεχθείδαι. πεσσοὺς προσελθών. κρεισόνων νικώμενοι·—ἦ πεφίκαμεν σοφαὶ μάλιστα* :—account for the change of gender with the same speaker.

8. Translate :—

(E) Aristophanes, The Frogs, vss. (*a*) 131–142, and (*b*) 1182-1196.

9. (*a*) Whence is vs. 1182 taken? (*b*) What is the point of the reference in vs. 1196? (*c*) *τὼ δύ' ὀβολώ*,—explain the allusion. (*d*) what were the grounds of Aristophanes' ridicule of Euripides. (*e*) Into what parts was the *Parabasis* divided, and what ones have we in this play?

9. Translate :—

F Pindar, Olymp. XIII. vss. 100-131—

10. Explain the meaning of the following words used in this ode :—*ἄμερον, ἀγλαόκουρον, ὁμότροπος, χρύσεαι, βοηλάτα Ἑλλώτια, πυκνότατον, χρυσάμπυκα, καρταίπολα, διθυράμβῳ.*

11. Translate :—

(C) Theocritus, Idyll VI. vss. 1–20.

12. Give the Attic equivalents of the following forms :—*νάσω, νίκη, ἐνθων, ἰσαμι, τώς κανθαρος, δήλετο, ὑφίητι, ὥπερ, θᾶσαι, ἐμίν, τυ, ἀείδες, ἀειδες, τέ.* (*b*) Resolve the following crases :—*ὠξ, τωὐβούλοιο, κεἶφ, κἠπεί, χὡς, κἠμ', ὄκχ', χἀμῖν.* (*c*) The age and characteristics of the poetry of Theocritus.

13. Translate :—

(H) Hesiod, Works and Days, vss. 801-821.

14. (*a*) How did Hesiod divide the month? (*b*) *Ὅρκον* :—explain and derive this word, and show how this genius is different from the Roman *Orcus* and the '*Pallidus Orcus*' of Virgil. (*c*) Write short notes on the meaning and derivation of :—*θαλαμήϊα, δείελα, μετάδουποι.*

B. A. EXAMINATION FOR HONOURS IN CLASSICS.

II. GREEK PROSE WRITERS.

WEDNESDAY, APRIL 11TH :—MORNING, 9 TO 12.

Examiner,.....REV. GEORGE CORNISH, LL. D.

1. Translate adding an explanatory note where you deem it necessary in any of the extt. given below :—

(A) Thucydides, Book VI. Cap. 82.

2. *(a)* Construe carefully the sentence *ἡμεῖς γὰρ Ιωνες * * * αὐτῶν ὑπακούσομεθα.* Classen conjectures *παροικοῦντες* ; others suspect *αὐτῶν* to be unsound, and omit it ; others conjecture *ἥκιστα πάντων* ; *ἥκιστα δ' αὐτῶν* ; and some MSS. have *ἥκιστ' ἄν* :—Comment on these and point out the special objection to the last-mentioned. *(b) ἀεί ποτε, μᾶλλόν τι* :—Give the force of *ποτε* and *τι*. *(c) ἀμννούμεθα—ἀμυνόμεθα* :—which reading is preferable, and why ?

3. Translate :—

(B) Herodotus, Bk. VIII., Chap. 87.

4. *(a) μετεξετέρους* :—derive and explain this form. *(b) πρὸς τῶν πελεμίων* :—Give the exact meaning of the preposition, and explain such usages as *τὰ ἐξωθεν, οἱ ἐκ τῆς νηός, τὸ ἀπ' ἐσπέρης κέρας. (c) συνήνεικε* :—express in Latin.

5. Translate :—

(C) Xenophon, Hellenics, Bk. II., Chap. 2, §§ 19-21, inclusive.

6. *(a) σπένδεσθαι—ἐξαιρεῖν* :—On what do these words depend ? *(b) καθελόντας—νομίζοντας* :—Why this change of Tense ? *(c) καθέντας* :—for this Classen would read *κατάξαντας* ;—on what grounds ?

7. Characterize briefly Herodotus, Thucydides, and Xenophon as historians and point out their relative value as authorities.

8. Translate :—

(D) Aristotle, de Poetica, Chap. 10, and Chap 24, down to *τιθεμένων παρήκοιεν.*

9. *(a)* Illustrate Chap. 10 by references to extant Greek dramas. *(b)* Write a note on *πρὸς τὸ πλῆθος τῶν τραγωδιῶν κ. π. λ. (c) τὸ μεταβάλλειν τὸν ἀκούοντα. τὸ γὰρ ὅμοιον ταχὺ πληροῦν ἐκπίπτειν ποιεῖ τὸ τραγωδίας, τὸ δὲ ἰαμβεῖον καὶ τετρμετρον κινητικα, καὶ τὸ μὲν ὀρχηστικὸν τὸ δὲ πρακτικόν* :—translate and comment on these extracts. *(d)* How would you account for the defective and incomplete state of this Treatise ?

10. Translate :—

(E) Demosthenes de Corona, § 314, from *ἐπειδὴ δ' εἰς τοὺς δημότας* down to *ὑφ' ἁπάντων ὦψαι* (pp. 299-300, Ed. Tauchnitz).

11. How far was Demosthenes justified in the public and private character he gave to Æschines.

12. Translate :—

(F) Plato, de Republica, Bk. II., Chap. 17, down to *κομιδῇ μὲν οὖν*

13. Write an explanatory note on what *ἡ παιδεία*, among the Greeks included.

14. Translate (unprepared):—

θεασάμενος δ' ὁ Ἀννίβας ἐσήμηνε τὴν ἵππον κυκλοῦσθαι τοὺς πολεμίους. ἐσκεδασμένων δ' ἀρτι τῶν Ῥωμαϊκῶν ἱππέων διὰ τὰ θηρία, καὶ τῶν πεζῶν μόνων τε ὄντων καὶ κακοπαθούντων καὶ δεδιότων τὴν περικύκλωσιν, φυγὴ πανταχόθεν ἦν ἐς τὰ στρατόπεδα. καὶ ἀπώλλυντο οἱ μὲν ὑπὸ τῶν ἱππέων καταλαμβανόντων ἅτε πεζούς, οἱ δὲ ὑπὸ τοῦ ποταμοῦ παραφέροντος· τοῦ γὰρ ἡλίου τὴν χιόνα τήξαντος ὁ ποταμὸς ἐρρύη μέγας, καὶ οὔτε στῆναι διὰ τὸ βάθος οὔτε νεῖν διὰ τὰ ὅπλα ἐδύναντο. Σκιπίων δὲ αὐτοῖς ἑπόμενος καὶ παρακαλῶν ὀλίγου μὲν ἐδέησε τρωθεὶς διαφθαρῆναι, μόλις δ' ἐς Κρεμῶνα διεσώθη φερόμενος· ἐπίνειον δέ ἦν τι βραχὺ Πλακεντίας, ᾧ προσβαλὼν ὁ Ἀννίβας ἀπώλεσε τετρακοσίους καὶ αὐτὸς ἐτρώθη· καὶ ἀπὸ τοῦδε πάντες ἐχείμαζον, Σκιπίων μὲν ἐν Κρεμῶνι καὶ Πλακεντίᾳ, Ἀννίβας δὲ περὶ Πάδον.

B.A. EXAMINATION FOR HONOURS.

III. LATIN PROSE WRITERS.

TUESDAY, APRIL 24TH :—MORNING, 9 TO 12.

Examiner, ... REV. GEORGE CORNISH, LL.D.

1. Translate the following extracts into English, adding a brief comment where any peculiar form or construction seems to you to require it:—

(A) Tacitus, Annals, Bk. I., Chap. 74.

2. (*a*) Majestatis postulavit:—Comment on the grammatical usage, and write a note on the Lex majestatis. (*b*) Qui formam :—What is the antecedent to qui? (*c*) Miseriæ * * et audaciae :—Is Tacitus peculiar in this use of the plurals of abstract nouns? (*d*) Saevitiae principis adrepit:—Note the construction. (*e*) Quo loco censebis?:—What was the usual custom in voting? (*f*) Ad veciperatores itum est:—Explain.

3. Translate, and write short explanatory notes (historical or otherwise) on the following extt. from Bk. II.:—(*a*) 'Caniturque adhuc barbaras apud gentes. Graecorum annalibus agnotus, qui sua tantum mirantur, Romanis haud perinde celebris, dum vetera extollimus recentium incuriosi.' (*b*) 'Qua gloria aequabat se Tiberius, priscis imperatoribus, qui venenum in Pyrrum regem vetuerant prodiderantque.' (*c*) Rettulit Cæsar capiendam 'virginem in locum Occiae, quæ * * * Vestalibus, sacris praesederat.' (*d* Epidaphnae.' (*e*) 'Indoluere exterae nationes regesque; tanta illi comitas

in socios, mansuetudo in hostis; visu et aditu iuxta venerabilis, cum magnitudinem et gravitatem summae fortunæ retineret, invidiam et adrogantiam effugerat:'—Of whom was this written, and is it true?

4. Translate:—

(B) Tacitus, Histories, Bk. I., Chap. 72.

5. (*a*) Give the dates of the events recorded in Histories I. and Annals I. and II., respectively. (*b*) Compare the Annals and Histories in respect of style, literary finish, etc. Which were written first? (*c*) Write short explanatory notes on:—plebs sordida; miles urbanus; clientes libertique; 'Ita visum expedire, provinciam aditu difficilem, annonæ fecundam, superstitione ac lascivia discordem et mobilem, insciam regum, ignaram magistratuum, domi retinere; ubique hasta et sector, et inquieta urbs auctionibus; tesserarium speculatorum.

6. Translate:—

(C) Livy, Bk. XXII., Chap. 10, down to *sacrorum curantibus*.

7. Point out archaic forms in ext. (C) and give their later equivalents.

8. Translate:—

(D) Cicero, de Imp. Cn. Pomp. Chap. V., down to *discrimen vocatur*.

9. (*a*) Explain the historical references of ext. (D). (*b*) Account for the words 'totius Graeciae lumen' by showing the importance of Corinth. (*c*) 'Mercatoribus ac naviculariis:—explain what these specially were.

10. Translate:—

(E) Cicero, De Officiis, Book II., chap. 9; §§ 32—34, inclusive.

What systems of philosophy did Cicero follow at different periods of his life? Define the main object and scope of the De Officiis.

B.A. EXAMINATIONS FOR HONOURS IN CLASSICS.

IV. LATIN POETS.

TUESDAY, APRIL 24TH:—MORNING, 9 to 12.

Examiner,..... REV. GEORGE CORNISH, LL.D.

1. Translate (adding an explanatory note where you may deem it necessary on any peculiar form or construction in any of the extt.):—

(A) Horace, Satires, Book I., Sat. vi., vss. 56—80.

2. (*a*) In what other of his poems has Horace given references to his own character and life? How would you charactertise his relationship with Mæcenas and Augustus? (*b*) Comment on the following references:—(1) Lydorum quidquid Etruscos, etc. (2) Dum ingenuus. Give the equivalent in Greek. (3) Quo tibi, Tilli, sumere depositum clavum. Construe, parsing *Quo* and illustrating its use from other passages. (4) Atque salutandi plures.

3. Translate:—

(B) Juvenal, Sat. x., vss. 133—146.

4. Heinrich condemned vss. 146, 187, and many others, on the ground of their not being necessary to complete the sense :—show rather in what respects such vss. are in keeping with the general style and scope of Juvenal. (*b*) What defects of style are exemplified in this satire? (*c*) Explain :—(1) Pila, cohortes, egregios equites et castra domestica. (2) Totis Quinquatribus. (3) Gabiorum potestas. (4) Si Nurtia Tusco favisset.

5. Translate from Sat. viii. the following extracts, adding an explanatory note on various readings, grammatical construction, historical references, or social usages, as you may think necessary :—

(*a*) Vss. 6-9. (*b*) Vss. 48-50. (*c*) Vss. 96-97. (*d*) Vss. 140-141. (*e*) Vss. 232-234. (*f*) Vss. 240-243.

9. Translate : –

(C) Persius, Sat. v., vss. 30-44 ; and vi., vss. 51-66.

7. (*a*) Point out peculiarities of construction by Persius. (*b*) Whom did he take as his literary model? How would you account for his frequent obscurity? (*c*) Cite passages from these two satires of doubtful and disputed interpretation. (*d*) *Cor* Enni, etc. :—Explain this use of the word *cor*, and the reference to Ennius.

8. With what known writer did Satire, as developed by Horace and Juvenal, originate ? Whence the term *Satira?*

9. Translate :—

(D) Plautus, Aulularia, Act ii., sc. 2, vss. 9-29.

(E) Terence, Adelphi, Act v., sc. 7, vss. 8-25.

10. (*a*) Name the metres of extt. (D) and (E), severally, and write down the schemes, pointing out in what respects they differ from the corresponding metres of Greek Comedy. (*b*) Scan the first three vss. of each ext. (*c*) What etymologies of such forms as *mecastor*, *edepol*, *mehercle*, and *equidem* have been suggested ? (*d*) What inferences may be drawn from the linguistic peculiarities of Plautus as to the state of the Latin tongue in his day ? (*e*) On what grounds is Plautus held to be superior to Terence as a dramatist? (*f*) Comment briefly on the personal references in the Prologue to the Adelphi : who were the 'homines nobilis' ?

11. Translate :—

(F) Virgil, Æneid, Bk. iv., vss. 173-194.

12. (*a*) Whence did Virgil get the hint for this description. (*b*) *Ira deorum* :—What Genitive ? (*c*) *Dignetur* :—Why *Subj.* ? (*d*) *Hiemem* * * *fovere*. Explain the metaphor.

13. Translate :—

Dum te prosequor et domum reduc
Aurem dum tibi praesto garrienti,
Et quidquid loqueris facisque laudo,
Quot versus poterant, Labulle, nasci?

Hoc damnum tibi non videtur esse,
Si quod Roma legit, requirit hospes,
Non deridet eques, tenet senator,
Laudat causidicus, poeta carpit,
Propter te perit? hoc, Labulle, verum est?
Hoc quisquam ferat, ut tibi tuorum
Sit maior numerus togatulorum,
Librorum mihi sit minor meorum?
Triginta prope iam diebus una est
Nobis pagina vix peracta. Sic fit,
Cum cenare domi poeta non volt.

B.A. EXAMINATION FOR HONOURS IN CLASSICS.

WEDNESDAY, APRIL 4TH:—MORNING, 9 TO 12.

V. GREEK PROSE COMPOSITION.

Examiner,..... REV. GEORGE CORNISH, LL.D.

Translate into Greek (accented):—

Thereupon, the herald of the Thirty commanded the officers to arrest Theramenes; and they having entered with their attendants, Satyrus, the most reckless and profligate of them, leading them, Critias said:—We deliver over to you Theramenes, who is before you condemned according to the law; and do you, officers, apprehend and conduct him to prison and complete your duty. On these words, Satyrus dragged him away from the altar, the attendants also dragged him away. Theramenes, as might have been expected, invoked gods and men to look down on what was passing; but the senate maintained silence, seeing that the men at the bar were also like Satyrus, and that the space in front of the senate-house was full of guards, and also that those present had daggers with them. They conducted the man through the Agora, protesting against his treatment in very loud accents. One saying of his is recorded when Satyrus told him that he would suffer, if he were not silent, he said:—And if I am silent, shall I not still suffer? And when he began to drink the hemlock, constrained to die, they report that he said, as he dashed away the last drops, 'This to the health of the handsome Critias.'

B. A. EXAMINATIONS FOR HONOURS IN CLASSICS.

VI. LATIN PROSE COMPOSITION.

WEDNESDAY, APRIL 4TH :—AFTERNOON, 2 TO 5.

Examiner,.....REV. GEORGE CORNISH, LL.D.

Translate into Latin :—

Catilina was a man of high patrician birth; but ruined in fortune by extravagance, and in reputation by a life of debauchery, he had steeled his heart against pity in the proscriptions of Sulla, during which he murdered his brother because, he said, he found his name on the list. Foiled now in his ambition to restore his fortunes by being elected to the consulship, he gathered around him all the desperadoes, mostly of noble birth, who, like him, knew that their only chance of power lay in revolution. News came to the consul of secret meetings in Catilina's house on the Palatine. But indeed Catilina was the best informer against himself; from his place in the Senate, with all the fatuity of a debauched mind, he began to indulge in significant boasts. "There were," he said, "in the state two bodies—one weak, with a weak head; the other strong, but without a head;" but he did not intend the headless body to remain without a head, so long as he was alive. He was endeavouring to give to his conspiracy the colour of a popular movement. Cicero's spies informed him of everything, so that an attempt to assassinate him was frustrated. On the 8th of November he assembled the Senate in the Temple of Jupiter Stator, and told the purturbed fathers of a meeting held the night before in the house of one Læca, at which arrangements were made for slaughtering the magistrates and burning the city. Catilina himself, with his pale face and shuffling gait, had the audacity to appear in the assembly, and held very high language about a noble like himself being touched by the rustic from Arpinum; but the murmurs of the Senate were unmistakable, and next day Cicero announced to the people that the incendiary had left the city. He had gone to Etruria, where a band of adventurers was already gathered under the banner of another ex-Sullanian, T. Manlius, but Catilina took with him a silver eagle of Marius', anxious if possible to assume at least the fringe of the mantle of the great popular leader.

B.A. EXAMINATION FOR HONOURS IN CLASSICS.

VII. GENERAL PAPER.

WEDNESDAY, APRIL 11TH :—AFTERNOON, 2 TO 5.

Examiner,.....REV. GEORGE CORNISH, LL.D.

1. The origin of written alphabets. From whence and through whom did the Greeks get theirs? What changes took place in it?

2. (*a*) Where was the Aeolic dialect spoken? Name the poets who wrote in it, and the character of their poetry. (*b*) Name the poets in the Doric dialect whose works have come down to us.

3. (*a*) Explain, giving examples, the terms *agglutinative, inflectional,* and *analytical,* as applied to languages. As languages grow in age and in use, in what direction is their tendency? Give illustrations. (*b*) Analyse the following words, naming each part:— *δούρατος, μεμνῆσθαι, ἐξεδεξάμην.*

4. Translate into Latin:—(*a*) *οὐκ ἐφη αὐτὸς ἀλλ' ἐκεῖνον ἐλεύσεσθαι.* (*b*) *ἠσθετο ὑπὸ τῶν πολεμίων νικηθεις.* Express in Greek:—(*a*) Gaius Gaiam duxit. (*b*) Gaio Gaia nupsit.

5. Explain the uses of the moods in Latin with *quum* and *dum.* Give the reasons for the following constructions:—(*a*) Zenonem, cum Athenis essem, audiebam frequenter. (*b*) Res, cum haec scribebam, erat in summum adducta discrimen.

6. (*a*) Explain the real import of the Ablative with such words as *utor, fruor, vescor,* and of the Abl. of Price. (*b*) Give rules for the arrangement of words in a Latin sentence.

7. "Satura quidem tota nostra est:"—Comment on this statement of Quintilian, and characterize briefly the chief writers in this department of Latin literature. To what species of Greek literature does Roman Satire show the greatest resemblance.

8. (*a*) The place and functions of the Chorus in the Greek Drama, and the phases through which it passed in Tragedy. (*b*) Compare the three great Attic Dramatists in their use of the Chorus.

9. (*a*) Account for the difference between the dialect of the Chorus and that of the dialogue in Greek Tragedy. (*b*) Write down a list of Ionic words found in the Attic Dramatists. How may their presence be accounted for?

10. (*a*) Instance pairs of words in Greek distinguished in meaning by their accent. (*b*) Accentuate the following:—*Κτησιφων δε, ω Αθηναιοι, υπερπηδησας τον νομον τον περι των υπευθυνων κειμενον και την προφασιν, ην εγω αρτιως προειπον υμιν ανελων, πριν λογον, πριν ενθυνας δουναι, γεγραφε πεταξυ Δημοσθενην αρχοντα στεφανουν.*

B.A. EXAMINATION FOR HONOURS IN CLASSICS.

VIII. HISTORY OF GREECE AND ROME.

TUESDAY, APRIL 24TH:—AFTERNOON, 2 TO 5.

Examiner,.....REV. GEORGE CORNISH, LL.D.

1. An account of the Pelasgi. What are Grote's views respecting them?

2. Discuss the causes of the early superiority of the Ionic Colonies in Asia Minor over the Mother-country in poetical, philosophical, and historical literature.

3. (*a*) The Pan-Hellenic festivals; their uses and effects on the Greek mind. (*b*) After the year B.C. 560 new causes began to operate favouring union among the several States:—comment on and explain this statement of Grote's.

4. (*a*) What character did the Greeks attach to the word τύραννος? (*b*) Specify the principal Despotisms established in Greece.

5 Distinguish between the Σπαρτιῆται, the Περίοικοι, the Εἵλωτες, the Νεοδαμώδες, and the Μόθωνες, under the government of Sparta. Explain the κρυπτεία.

6. *Corcyra—Epidamnus*:—How were they related to each other? What had they to do with the Peloponnesian war? Give the modern name of the former and the Latin name of the latter. Why was the change made?

7. The constitution and powers of:—(1) ἡ βουλὴ ἐν Ἀρείῳ πάγῳ; (2) ἡ βουλὴ τῶν πεντακοσίων; (3) ἡ ἐκκλησία, at Athens, in the time of Pericles. What conservative element was there in these.

8. Mommsen maintains that no legends, such as were woven around the conquest of Ilion, gathered around celebrated names, and thus Italy remained without national poetry or art. Niebular says:—"The Romans, before the introduction of Greek literature possessed national epic poems which * * * leave everything produced by the Romans in later times far behind them." Which of these two statements is the more probable? What arguments are advanced for the latter?

9. Give an account of the constitution and powers of the Roman Senate in the best days of the Republic.

10. An account of the growth of the dominion of Rome during, and in consequence of, the Punic Wars.

11. When did Pyrrhus invade Italy, and under what pretext? In what part of Italy did he wage war with the Romans, and what was the result of the war?

12. Give Mommsen's estimate of the character, personal and political, of Cæsar and Cicero. And state what were the leading principles of the policy of each.

13. Define the meaning of the terms:—*Provincia*, *Colonia*, *Municipium*, *Civitas*, *Clientes*, and *Socii*.

14. Give the ancient names of the following:—Palermo, Scutari, Cologne, Mayence, Crimea, Cape Matapan, Treves, Piacenza, Lyons, Elbe, York, Stamboul.

MATHEMATICS AND NATURAL PHILOSOPHY.

FIRST YEAR.

GEOMETRY—ARITHMETIC.

WEDNESDAY, APRIL 11TH:—MORNING, 9 TO 12.

Examiners,..... { ALEXANDER JOHNSON, LL.D.
G. H. CHANDLER, M.A.

1. Give Euclid's definition of proportion, and state and prove any proposition in which it is applied.

2. Similar triangles are in the duplicate ratio of their homologous sides. Define duplicate ratio.

3. On a given straight line construct a segment of a circle containing an angle equal to half a right angle.

(*a*) Given the base, vertical angle and area of a triangle, construct it.

4. Find a mean proportional between .035 and 1.346.

5. A sets out walking at $2\frac{1}{2}$ miles per hour along a straight road, and when he has gone 8 miles B starts after him at $3\frac{1}{4}$ miles per hour, when and where will he overtake him

6. How many pieces of wall paper, each 9 yds. long and 25 inches wide, will cover the walls of a room 18 ft. 9 in. long, 18 ft. wide, 12 ft. high ?

7. The opposite angles of a quadrilateral figure inscribed in a circle are together equal to two right angles.

(*a*) Divide a circle into two parts, so that the angle contained in one of the parts may be twice the angle contained in the other.

8. If the vertical angle of a triangle be bisected by a straight line which also cuts the base, the ratio of the segments of the base shall be the same as that of the sides of the triangle.

9. In the last question, show that the rectangle contained by the sides is equal to that contained by the segments of the base together with the square on the bisecting line.

10. A gallon of water contains 277.2 cubic inches and weighs 10 lbs. Find in ounces the weight of a cubic foot of water.

11. One link (*i.e.*, one hundredth) of a chain being 7.92 inches, prove that 10 square chains make an acre.

Viva voce Examination also.

FIRST YEAR.

TRIGONOMETRY—ALGEBRA.

THURSDAY, APRIL 12TH :—MORNING, 9 TO 12.

Examiners ..... { ALEXANDER JOHNSON, LL.D
G. H. CHANDLER, M.A.

(Write the answers on two separate sets of papers headed A *and* B *respectively to correspond to the questions.)*

A.

1. Find the sine, cosine and tangent of 120°.

2. Find the circular measure of 18°.

3. In any triangle prove

$$\text{Cos } \tfrac{1}{2}\text{A} = \sqrt{\frac{s\,(s-a)}{bc}}$$

4. Solve the equations :—

(*a*) $\frac{x}{x-2} - \frac{x+1}{x-1} = \frac{x-8}{x-6} - \frac{x-9}{x-7}$;

(*b*) $\frac{x-a}{2} = \frac{(x-b)^2}{2x-a}$

(*c*) $3x - 7z = 0$; $\frac{2}{7}x + \frac{5}{3}z = 7$

(*d*) $\cdot 5x - \cdot 3x = \cdot 25x - 1$

5. Reduce to its simplest form.

$$\frac{\frac{1}{x} - \frac{2}{x^2} - \frac{3}{x^3}}{\frac{9}{x} - x}$$

6. Two rectangles contain the same area, 480 square yards. The difference of their lengths is 10 yards, and of their breadths, 4 yards, find their sides.

7. Resolve into factors $4 - 5x - 6x^2$.

B

8. Express the angle of a regular pentagon in degrees and also in radians.

9. Show that

$$(a)\ \tan(A - B) = \frac{\tan A - \tan B}{1 + \tan A \tan B},$$

$$(b)\ \tan A - \tan B = \frac{\sin(A - B)}{\cos A \cos B},$$

$$(c)\ \frac{\sin A + \sin B}{\cos A + \cos B} = \tan\left(\frac{A + B}{2}\right),$$

$$(d)\ \frac{1 - \cos A}{\sin A} = \tan\frac{A}{2},$$

10. In any triangle the sides are proportional to the sines of the opposite angles.

11. Compare $\frac{1}{2}\sqrt{2}$ and $\frac{1}{3}\sqrt[4]{27}$; also $\sqrt{5}$, $2\sqrt[3]{\frac{3}{2}}$, and $3\,(4\frac{1}{2})^{-\frac{1}{6}}$.

12. Find the greatest common measure and least common multiple of $3x^2 - 2x - 1$ and $4x^3 - 2x^2 - 3x + 1$.

13. The greater of two numbers multiplied by their sum is 228, and their difference is 5, what are the numbers?

INTERMEDIATE EXAMINATION.

GEOMETRY—ARITHMETIC.

WEDNESDAY, APRIL 11TH:—MORNING, 9 TO 12.

Examiner,..... ALEXANDER JOHNSON, LL.D.

1. If two triangles be equiangular to one another, the sides about the equal angles are proportional, and the sides opposite the equal angles are homologous (define *homologous*).

(*a*) If two triangles be on equal bases and between the same parallels any straight line parallel to their bases will cut off equal areas from the two triangles.

2. If four right lines be proportional the rectangle under the extremes is equal to the rectangle under the means.

(*a*) If from the vertical angle of a triangle a straight line be drawn perpendicular to the base, the rectangle contained by the sides of the triangle is equal to the rectangle contained by the perpendicular and the diameter of the circle described about the triangle.

3. From a given straight line cut off one-fifth part.

4. Inscribe a regular quindecagon in a given circle.

5. Bisect a given arc of a circle.

6. Divide a given straight line into two parts so that the rectangle under the whole line and one part may be equal to the square in the other.

7. A river 14 feet deep, and 182 yards wide, flows at the rate of 3 miles an hour, how many tons of water will pass a given point on the bank in one minute, assuming a cubic yard of water to weigh $\frac{3}{4}$ ton.

8. Reduce 4 hours, 48 minutes to the decimal of 6 hours.

9. A boy having spent $\frac{3}{5}$ of his money on pictures and $\frac{5}{9}$ on fruit and cakes had 25 cents left, how much had he at first?

10. Two persons in partnership contribute as follows: A $2500 at the beginning of the year and at intervals of 3 months; B $2000 at beginning of year and also 6 months after; how will they divide the profits (say $3700) at the year's end?

11. Find the square root of .001521.

12. Divide 28.125 by .9375 and multiply the result by the square of $\frac{1}{2}$.

INTERMEDIATE EXAMINATION.

TRIGONOMETRY AND ALGEBRA.

THURSDAY, APRIL 12TH:—MORNING, 9 TO 12.

Examiner, ... ALEXANDER JOHNSON, LL.D.

1. Define a logarithm. State the four principal rules used in calculations by logarithms. Prove the rule for division by logarithms.

(*a*) Divide .0053618 by .04567 by means of logarithms.

2. Find by logarithms in how many years a sum of money will be doubled at 5 per cent. compound interest.

3. From two stations A and B on shore, 3472 yards apart, a ship C is observed at sea; the angles BAC and ABC are simultaneously observed to be 72° 34′ and 81° 41′ respectively; find the distance from A to the ship.

4. From the top and bottom of a castle which is 68 feet high, the angles of depression of a ship are observed to be 16° 28′ and 14° 21′; what is its distance in yards?

5. The two sides of a right angled triangle are 1760 yds. and 1000 yds. long respectively, find the angles.

6. Prove $\sin A + \sin B = 2 \sin \frac{A+B}{2} \cos \frac{A-B}{2}$.

$$\cos \frac{A}{2} = 1 - 2 \sin \frac{2A}{4}.$$

7. Find the circular measure of 20°.

8. Trace the changes of sign in the tangent as the angle increases from 0° to 270°.

9. The small wheel of a bicycle makes 135 revolutions more than the large wheel in a distance of 260 yards; if the circumference of each was

one foot more, the small wheel would make 27 revolutions more than the large wheel in a distance of 70 yards; find the circumference of each wheel.

10. Find at what times between 11 and 12 o'clock the hands of a watch are at right angles.

11. If $x + \sqrt{z} = a + \sqrt{b}$, prove $x = a$ and $z = b$, $\sqrt{z}$ and $\sqrt{b}$ being surds.

12. Find the L. C. M. of $x^2 - 7x + 12$, $3x^2 - 6x - 9$, and $2x^2 - 6x - 8$.

13. Solve the equations:—

(*a*). $\frac{1}{x} + \frac{1}{y} = 2 \; ; \; x + y = 2$

(*b*). $\frac{x+3}{2x-7} - \frac{2x-1}{x-3} = 0$

(*c*). $ax + by = l \; ; \; bx + ay = m$

(*d*). $\frac{x-4}{3} + \frac{2x-3}{35} = \frac{5x-32}{9} - \frac{x+9}{28}$

14. Resolve into factors $x^2 + x - 110$.

THIRD YEAR.

MECHANICS—HYDROSTATICS.

THURSDAY, APRIL 5TH:—MORNING, 9 TO 12.

Examiner,..... .....ALEXANDER JOHNSON, LL.D.

1. Find the time of descent of a simple pendulum to its lowest point.

(*a*) Explain why the pendulum ascends on one side to a height equal to that which it has fallen from on the other. When is its velocity greatest and why?

2. A fly-wheel 5 feet in diameter makes 180 revolutions in a minute, find in pounds the centrifugal force acting on a portion of its mass weighing one pound, supposing it all concentrated at the rim.

3. Explain and give the proofs of the following equations relating to falling bodies

$$W = mg \; ; \; v = gt \; ; \; s = \tfrac{1}{2} gt^2 \; ; \; v^2 = 2gs.$$

assuming only the laws of motion.

4. A body is kept in equilibrium on an inclined plane by a force parallel to the length of the plane, find the ratio of the power to the resistance.

5. A bar of iron 15 inches long, weighing 12 lbs., and of uniform thickness, has a weight of 10 lbs. suspended from one extremity, where must a fulcrum be placed so that it may just balance upon it?

6. If P = Power
P' = Pressure on the thread of a screw
I = Interval between the threads
L = Length of thread in one turn of the screw
r = Radius of screw
R = Radius of circle described by the Power

Prove $\frac{P}{P'} = \frac{Ir}{LR}$.

7. Describe the ordinary air-pump and show that it can never make a perfect vacuum. How is the degree of rarefaction of the air determined.

(*a*) If the volume of the receiver and leading-tube be 4 times that of the pump, find the number of strokes necessary to produce a rarefaction of $\frac{4}{400}$, the barometer standing at 30 inches.

8. Give the formula for determining the height of a mountain by a barometer, and explain how it is used, specifying the observations necessary, and the subsequent method of calculation in full.

9. Explain the mode of finding specific gravity by the Hydrostatic Balance.

(*a*) A sovereign whose weight is 123.02 grs. weighs in water 116.02 grs, find its specific gravity.

10. The specific gravity of a nugget, composed of gold and quartz, whose weight is $11\frac{1}{2}$ oz., is 7.43, find the weight of the gold, the sp. gr. of the quartz being 2.62, and the sp. gr. of gold being 19.35.

11. Prove that the product of the volume and pressure of a given mass of gas divided by its *absolute temperature* (define this) is constant.

12. Find the exact pressure in pounds on a square foot due to 32 feet head of water, first proving the rule by which you calculate it.

Vivâ voce examination also.

THIRD YEAR.

OPTICS—DESCRIPTIVE ASTRONOMY.

THURSDAY, APRIL 12TH:—MORNING, 9 TO 12.

Examiner,.....ALEXANDER JOHNSON, LL.D.

1. If a ray of light starting from a point Q on the diameter of a concave spherical mirror cut the same diameter again, after reflection from the mirror, in a point q, prove that the distances of Q and q from the surface are to each other in the ratio of their distances from the centre.

2. The flame of a candle measuring 2 inches in height is placed in front of a concave mirror of 3 ft. radius at a distance of 10 feet; find the position and magnitude of the inverted image.

a. Find the magnitude if the candle be placed at 17 inches from the mirror.

3. A bright coin is placed at the bottom of a basin of water 3 inches deep, calculate the difference between the apparent distance of the coin from the surface and its real distance. How would you show experimentally that the bottom of the basin is not seen in its real position.

4. If a ray of light falls nearly perpendicularly on a prism of small angle, prove that

$$\delta = (\mu - 1)\ \varepsilon$$

5. For a convex lens prove $\frac{1}{d} - \frac{1}{D} = -\frac{1}{f}$

6. The focal length of a convex lens is 20 ft. find the size of the image of an object 1 inch in diameter, placed 100 feet in front of the lens.

7. Account for a total eclipse of the moon; which side of the moon will first be darkened, and why?

8. How is the spherical shape of the earth accounted for?

9. Account for the difference of seasons in the course of a year.

10. Give a general account of the physical constitution of the sun.

11. Define equator, ecliptic, meridian, latitude and longitude of a place, summer solstice, vernal equinox.

12. Classify the nebulæ. Describe the manner in which their constitution has been ascertained.

B.A. ORDINARY EXAMINATION.

MECHANICS—HYDROSTATICS.

WEDNESDAY, APRIL 11TH:—MORNING, 9 TO 12.

Examiner,..... ALEXANDER JOHNSON, LL.D.

1. What is meant by the C. G. S. system of units?

Define *dyne*, *poundal*, *erg*, and find the ratios of each to the corresponding unit in the ordinary system.

2. If the length of a simple pendulum be 6 feet, and it swing through an arc of 10° on each side of the vertical position, find its velocity at the lowest point.

3. A gun on board a steamer, which is travelling at the rate of 15 miles an hour, is pointed directly at a target on shore, which is on a line perpendicular to the direction of the steamer's motion, and at a distance of 1 mile; the ball is fired from the gun with a velocity of 1,500 feet a second, find how far from the centre of the target the ball will pass.

4. Three forces meeting in a point are in equilibrium, show that any one is proportional to the sine of the angle included by the directions of the other two.

(*a*) Apply this to find the ratio of the power to the weight of a body kept in equilibrium on a given inclined plane by a force making an angle *A* with the inclined plane.

5. If a waggon weighing 2 tons rest upon an incline of 1 in 20, find the pressure on road.

6. If the directions of two forces meet in a point, their moments with respect to any point situated on their resultant are equal and opposite.

7. Describe the Siphon Manometer, and explain the mode of using it.

8. If two gases having the same temperature and pressure are mixed prove

$$Vs = V's' + V''s''$$

9. If the weight of a liter of dry air of the temperature 0 C., and pressure 760 mm. be 1.293 grams, investigate a formula for determining the weight in grams of a given volume of air, at a given pressure and given temperature.

10. A spherical balloon of 10 meters diameter is filled with gas whose sp. gr. is .500 and pressure 726 mm., find the weight in kilograms of the gas if its temperature is 10° C.; prove your formula.

11. Explain the construction of the barometer, and the corrections necessary for any observation.

12. Find the pressure in tons on the bottom of a tank 2 yards square, in which the water is 8 feet deep.

B.A. ORDINARY AND THIRD YEAR.

EXPERIMENTAL PHYSICS—*Light and Heat.*

Examiner,..... ALEXANDER JOHNSON, LL.D.

1. What is *plane polarized* light? How may a beam of it be obtained? State any physical property by which it may be tested.

2. Explain the *reflection* of light according to the wave theory.

3. How is it shown that the colours of bodies belong not to the body but to the incident light?

4. What is the *direct-vision* spectroscope? Describe an experiment illustrating the principle on which it is constructed.

5. It is desired to project on the wall of a given darkened room the largest possible image of a luminous object formed by a convex lens—if there be a choice of lenses, state which is the best for the purpose and what is the best position for the object relatively to the lens. Give your reasons.

6. How are the intensities of two lights compared by Bunsen's Photometer? Describe it.

7. State the mechanical equivalent of heat on the centigrade scale, and calculate the amount of heat developed in 12 hours in a manufactory in which 1·2 horse-power is consumed each minute in overcoming friction.

8. Describe the Otto Gas Engine, explaining its action.

a. If the temperature be raised by the explosion from 150° C. to 1530° C. find the mechanical equivalent of the heat evolved, the weight of the air being assumed to be .075 lb., and the specific heat of air at a constant volume being 0.169.

9. Find the weight of steam at 100° centigrade necessary to melt a block of ice at 0° weighing 60 lbs., the latent heat of steam and water being 540 and 80 C. respectively. Explain your process.

10. How are the heights of mountains determined by means of the boiling point of water?

11. Calculate the temperature on the centigrade scale which corresponds to—40° Fah.

12. Describe the manner in which the walls of a building that had begun to bulge outwards were restored to their right position by an application of the force of heat.

B.A. ORDINARY EXAMINATION.

EXPERIMENTAL PHYSICS (*Additional Department*).

Electricity, Magnetism and Sound.

WEDNESDAY, APRIL 18TH:—MORNING, 9 TO 12.

Examiner,..... .....ALEXANDER JOHNSON, LL. D.

1. State Ohm's Law, naming and explaining the units employed practically.

a. A galvanometer offering no appreciable resistance is connected by short thick wires with the poles of a cell, and the needle is deflected 20°. How much will it be deflected if two exactly similar cells are connected with the first *side by side*.

2. Supposing an Atlantic telegraph cable to be completely broken, how can the distance of the broken part from the shore end be ascertained?

3. Explain the construction and action of an electric bell.

4. Describe the Bell telephone, explaining its action.

5. A magnet is thrust into, and afterwards pulled out of a helix which is connected with a galvanometer. State the effects, and account for hem considering the magnet as a solenoid on Ampères' theory.

6. Describe a Groves' cell. What is the process of amalgamating the zinc, and why is it necessary?

7. Explain clearly the manner in which sound is propagated through air, defining wave, length and amplitude, and pointing out the analogies and differences in the case of the theory of light.

8. Given a siren, a tuning fork, and a closed tube of variable length, how may the velocity of sound in air be measured ?

9. Describe an experiment showing that when a rod is thrown into longitudinal vibrations it is lengthened and shortened alternately.

10. Explain on mechanical principles the fact that a tuning fork in vibration will cause another fork giving the same note to sound.

11. State the laws of the transverse vibrations of strings.

12. Describe Lissajous' method of exhibiting the composition of vibrations.

HONOUR EXAMINATION.

FIRST YEAR.

GEOMETRY.

MONDAY, APRIL 23RD :—MORNING, 9 TO 12.

Examiner,.....ALEXANDER JOHNSON, LL.D.

1. Given a circle, and the lengths of the three diagonals of a quadrilateral inscribed in it; construct the quadrilateral.

2. Describe a circle touching three given circles. Show that (?) light circles may be described fulfilling the conditions.

3. If a transversal be drawn through the centre of similitude of two given circles and intersecting them, the rectangle under the distance (?) of either pair of non-corresponding points from the centre of similitude is constant.

4. Inscribe in a given polygon another of the same number of sides, so that each of its sides shall pass through a given point.

5. If a variable tangent meet two fixed tangents, the intercept on it subtends a constant angle at the centre of the circle.

6. Given two unequal straight lines; find the arithmetic, geometric and harmonic means between them, and prove that the geometric mean is a mean proportional between the other two means.

7. In a given circle inscribe a triangle whose sides shall pass through three given points.

8. Describe a circle touching a given circle, and a given straight line at a given point.

9. Straight lines are drawn from a given point to a given straight line, and cut so that the rectangle under the whole line and the distance of its point of section from the given point is constant; find the locus of the point of section.

10 The circle through the feet of the perpendiculars of a triangle bisect the sides of the triangle and the segments of the perpendiculars towards the angles.

11. Divide a given straight line externally into two parts such that their rectangle shall be given.

12. Given the rectangle under two lines ; find them, when their sum is a minimum.

HONOUR EXAMINATION.

FIRST YEAR.

THEORY OF EQUATIONS—ALGEBRA.

TUESDAY, APRIL 24TH :—MORNING, 9 TO 12.

Examiner,.....ALEXANDER JOHNSON, LL.D.

1. Find the equation whose roots are the squares of the differences of the roots of the equation $x_4 + 4x + 3 = 0$

2. Solve the following equation which has equal roots.

$$x^6 - 3x_5 + 6x^3 - 3x^2 - 3x + 2 = 0$$

3. Show that the equation $x^5 - 4x^2 + 3 = 0$ has at least two imaginary roots.

4. An equation of an even degree, which is in its simplest form and has its last term negative, has at least two real roots of contrary signs.

5. In any rational integral function of x, arranged according to descending powers of x, any term which occurs may be made to contain the sum of all which follow it as many times as we please by taking x large enough.

6. State and prove Descartes' rule of signs.

7. State and prove Sturm's Theorem.

8. Apply Sturm's Theorem to find the situation of the real roots in the equation $x^4 - 4x^3 + x^2 + 6x + 2 = 0$

where $f_2(x) = 5x^2 - 10xc - 7$; $f_3(x) = x - 1$; $f_4(x) = +$

9. In an equation with real co-efficients imaginary roots enter in pairs.

10. State and prove the Exponential Theorem.

11. Prove the Binomial Theorem for a positive integral co-efficient.

12. Find how many words, each containing 3 consonants and 2 vowels, can be formed from 6 consonants and 4 vowels.

13. The 7th term of an Arithmetical Progression is 15 and the 21st term is 8; find the sum of the first 13 terms.

14. Insert 3 harmonic means between $\frac{1}{2}$ and $\frac{1}{6}$.

HONOUR EXAMINATION.

SECOND YEAR.

ANALYTIC GEOMETRY.

MONDAY, APRIL 23RD:—MORNING, 9 TO 1.

Examiner,.....ALEXANDER JOHNSON, LL.D.

1. Find the equation of the *evolute* of the eclipse.

2. Find the conditions that two conic sections given by the general equations should be *similar*, even though not similarly placed.

3. Give the base and product of the tangents of the halves of the base angles of a triangle, find the locus of the vertex.

4. Define the eccentric angle, and deduce from a method of constructing geometrically the diameter of an ellipse conjugate to a given one.

5. Show that the co-ordinates of the intersection of the two tangents at the points $x'y'$, $x''y''$, to the parabola $y^2 = px$ are $\frac{y'y''}{p}$ and $\frac{y'+y''}{2}$

6. Given base and sum of sides of a triangle, find the locus of the intersection of the bisectors of the sides.

7. Transform $ax^2 + 2hxy + by^2 = c$, referred to *oblique* axes, to the axes of the curve.

8. The length of the perpendicular from the centre on the tangent to an ellipse is $\frac{ab}{b'}$

9. The rectangle under the focal perpendicular on the tangent is constant and equal to the square of the semi axis minor.

10. Find the polar equation of the parabola, the focus being the pole.

11. Given any point O, and any two lines through it, join both directly and transversely the points in which these lines meet a circle, these of the direct lines intersect each other in P, and the transverse in Q, the line PQ will be the polar of the point O, with regard to the circle.

12. Given 4 points A, B, C, D, find the locus of a point O, such that

$$OA^2 + 2\,OB^2 + 3OC^2 + 4OD^2 = 100$$

13. Show that the condition that $Ax + By + C = O$ should touch $(x-a)^2 + (z-b^2) = r^2$ is

$$\frac{Aa + Bb + C}{\sqrt{A^2 + B^2}} = r$$

14. Find the conditions that the general equation of the second degree should represent:—

1°. A circle.

2°. Two right lines.

a. Determine exactly the locus represented by the following equation, and draw it approximately on paper for any assumed axes :—

$$x^2 - 5xy + 4y^2 + x + 2y - 2 = 0$$

15. Prove by the method of abridged notation that any two of the external bisectors of the angle of a triangle meet on the third internal bisector.

16. Given the vertical angle and sum of sides of a triangle, find the locus of the point where the base is cut in a given ratio.

17. Find the equation of a line passing through a given point and making a given angle with a given line for rectangular co-ordinates.

HONOUR EXAMINATION.

SECOND YEAR.

DIFFERENTIAL AND INTEGRAL CALCULUS—TRIGONOMETRY.

TUESDAY APRIL 24TH :—MORNING 9 to 1.

Examiner,..... ALEXANDER JOHNSON, LL.D.

1. Define *differential* and *differential co-efficient*, and find the differential co-efficients of x^n, $\sin x$, and $\log x$.

2. Write down and prove the formula for differentiating a fraction, when the numerator and denominator are each functions of x.

3. If $u = \phi(y)$ and $y = f x$ prove $\frac{du}{dx} = \frac{du}{dy} \cdot \frac{dy}{dx}$

4. Differentiate the following :—

(*a*), $y = \sin(\sin x)$

(*b*), $y = \log \sqrt{\frac{1 - \cos x}{1 + \cos x}}$

(*c*), $y = \frac{1 - \tan x}{\sec x}$

(*d*), $y = 2 \tan^{-1} \left(\frac{1 - x}{1 + x}\right)^{\frac{1}{2}}$

5. State and prove Taylor's Theorem, and derive Maclaurin's theorem from it.

(*a*). Expand $\tan^{-1} x$ in a series of powers of x.

6. Find the value of $\frac{\sqrt{a + x} - \sqrt{2x}}{\sqrt{a + 3x} - 2\sqrt{x}}$ when $x = a$

7. Find the following integrals:—

$$\int \frac{x\,dx}{\sqrt{1-x^2}}; \quad \int \cos^2 x\,dx; \quad \int \frac{dx}{x^2-a^2}; \quad \int \frac{dx}{x^2+4x+5}.$$

$$\int \frac{d\theta}{a+b\cos\theta}; \quad \int \frac{dx}{x^4(x^2-1)^{\frac{1}{2}}}; \quad \int x \sin x\,dx$$

8. Find the value of the definite integral $\int_2^3 \frac{x\,dx}{1+x^2}$.

9. Find a formula for integrating by successive reduction

$$\int \sin^m\theta \cos^n\theta\, d\theta$$

10. Find by integration expressions for the areas of the circle and ellipse.

11. Find expressions for the volume and surface of a right cone.

12. If we take any triangle on the sphere and its potar triangle, the sides and angles of the polar triangle are the supplements of the angle and sides respectively of the primitive triangle.

13. In any spherical triangle

$$\tan\tfrac{1}{2}(A+B) = \frac{\cos\frac{1}{2}(a-b)}{\cos\frac{1}{2}(a+b)} \cot\tfrac{1}{2}C$$

14. The hypotenuse of a right angled spherical triangle is 75° 20′ and a side is 64° 10′ find the other side.

15. Assuming Gregory's theorem find by Machin's theorem the value of π.

16. State and prove Demoivre's theorem.

ENGLISH LANGUAGE AND LITERATURE.

ENGLISH LITERATURE.

FIRST YEAR.

MONDAY, APRIL 9TH:—MORNING, 9 TO 12.

Examiner, ... CHAS. E. MOYSE, B.A.

1. (*a*) Mention two Anglo-Saxon poems which should be connected with Beowulf. Say what you know about them.

(*b*). What was said in the lectures about Judith and the Battle of Maldon?

2. Write notes on Trivium, trouvère, rime royal, physiologus, couplet, gesta Romanorum.

3. Opposite each of the following works, (*a*) write the name of its author (*q*) say in what dialect it is written, (*c*) mention differences between the, dialects in question, (*d*) give some account of its character and place in our Literature: The Owl and Nightingale, the Ormulum.

4. (*a*) Mention the contributions of Robert de Borron and Walter Map to the literature of the Arthur-saga. (*b*.) Give the allegorical meaning of the following in Tennyson's Idylls of the King: Arthur, Guinevere, the three Queens, Lynette and the Knights in Garette and Lynette.

5. Give a brief account of the settlement of the Trojans in Britain. Notice two references to it in English Literature.

6. Give an account of the aim and mode of life of the Friars and their relation to the Universities.

7. (*a*) Give a sketch of Chaucer's life. (*b*) Make a note on the Seven. Wise Masters. (*c*) State Chaucer's original plan in regard to the Canterbury Tales. (*d*) Point out three leading differences between the Canterbury Tales and the Decameron.

8. (*a*) Give a table of the leading English and Scotch Chaucerians, in their order, and after the name of each write the title of one of his works (*b*) Give an account of the second Scotch Chaucerian.

9. (*a*) Mention a cause of the Great Renaissance, (*b*) what testimony does Erasmus give concerning Italy? Show that it did not hold good long.

10. (*a*) Trace the influence of the Renaissance at Oxford. (*b*) Give Nash's statements about St. John's College, Cambridge, and notice Sir John Cheke and his pupils.

INTERMEDIATE EXAMINATION.

ENGLISH LITERATURE.

MONDAY, APRIL 9TH:—MORNING, 9 TO 12.

Examiner,.....CHAS. E. MOYSE, B.A.

1. Give some account of the Steel Glass and of Sir Philip Sidney.

2. What light is thrown on the history of the Faerie Queene before publication?

3. Describe the general plan of the Faerie Queene as set forth by Spenser, and trace the Red Cross Knight until he becomes the captive of Orgoglio; explain the allegory as you proceed.

4. Name the chief indirect English Spenserians and a work of each.

5. Give some account of William Drummond of Hawthornden. With whom should he be connected in the development of Scotch Literature?

6. Examine L'Allegro, Comus and Lycidas. Give an account of Milton's Continental journey.

7. What are Moralities? Notice a specimen of the Interlude and name its author.

8. In what plays do the following characters appear: Friar Bungay, Matthew Merrygreek, Diccon, Will Summer, Bell'Imperia, Faustus, George-a-Greene? Mention the name (in full) of the writer of each play, and notice leading features of the plays themselves.

9. Give a brief analysis of Greene's Groatsworth of Wit bought with a Million of Repentance and of Kind Hart's Dreame. Why is Meres' Palladis Tamia important? What is its character?

10. Comment on leading features of Love's Labour's Lost, Romeo and Juliet, and Hamlet. What do you know about the First Folio?

INTERMEDIATE EXAMINATION.

ENGLISH LITERATURE.

Spalding: *Elizabethan and Stuart Periods.*

MONDAY, APRIL 9TH :—MORNING, 9 TO 12.

Examiners, ... { CHAS. E. MOYSE, B.A.
PAUL T. LAFLEUR, M.A.

1. Classify Shakspere's plays.

2. Give a short sketch of Spenser's Faerie Queene.

3. Name one work of each of the following: Jeremy Taylor, Richard Hooker, Bishop Hall, Sir Philip Sidney, Cowley, Marlowe, Giles Fletcher

4. What are the principal poems of Dryden? State the purpose for which any three of them were written; and give some idea of Dryden's place in, and his influence upon, English poetry.

5. Explain what is meant by the "French Rules of the Unities," and shew what principles lay at the bottom of them.

6. Give some account of Hobbes and also the names of two of his best known works. Discuss his political theories.

7. Make brief notes upon the following:—Bacon, Donne, Selden, Bunyan, Tillotson, Otway, Butler, Temple.

8. Give the names of the principal historians under Elizabeth and during the Protectorate with the titles of their most important works.

9. Discuss fully the effects of the Commonwealth and Protectorate upon the Literature of England.

INTERMEDIATE EXAMINATION.

ENGLISH HISTORY.

MONDAY, APRIL 9TH:—AFTERNOON, 2 TO 3.45.

Examiners,..... { CHAS. E. MOYSE, B.A. / PAUL T. LAFLEUR, M.A.

[Any six (but not more than six) questions are to be answered. Write the answers to A and B on separate bundles of paper.]

A.

1. Name the kingdoms of the so-called Heptarchy, and indicate the position of each.

2. Give an outline of the reign of Edward III.

3. What do you know concerning the Six Articles, the Mad Parliament Ich Dien, the Battle of Herrings, Defender of the Faith ?

4. Assign events to the following dates: 1265, 1474, 1497, 1830, 1843, 1846.

B.

1. Make brief notes (with dates) on: The Armada, Test Act, Bill of Rights, Catholic Emancipation, Repeal of the Corn Laws, Parliamentary Reform.

2. Give some account of the following, and shew the position of each in relation to the political history of his time:—Laud, Clarendon, Halifax Fox, Peel.

3. Write a sketch of the War of the Spanish succession, mentioning the names of the principal English statesmen and generals concerned, and the names and dates of important battles.

4. State the chief terms of the Union between England and Scotland.

INTERMEDIATE EXAMINATION.

ENGLISH LITERATURE. *The Tempest.*

MONDAY, 9TH APRIL:—AFTERNOON, 3.45 TO 5.03

Examiners,..... { CHAS. E. MOYSE, B.A. / PAUL T. LAFLEUR, M.A.

1. In what class of dramatic production do you place *The Tempest*, and what reasons can you give for your decision ?

2. Shew, by reference to the play, the dramatic development of the events, and give your opinion on this part of the treatment.

3. Analyse fully the character of Miranda (quoting from the play where t may seem advisable), and comment upon it.

4. Trace the course of events in the fifth act.

5. Ascribe the following to the personages by whom they are spoken State where each occurs, and make brief explanatory notes upon the words italicized;—

(*a*). .....would thou mightst *lie drowning the washing of ten tides*.

(*b*) I find my *zenith* doth depend upon
A most *auspicious* star.

(*c*) .....the *red plague rid* you
For *learning* me your language.

(*d*) Of *it* own kind, all *foison*, all abundance

(*e*) .....Poor worm, thou art *infected!*
This *visitation* shews it.

(*f*) Like this insubstantial *pageant* faded
Leave not a *rack* behind.

(*g*) Mine eyes, even *sociable to the show of thine*,
Fall fellowly drops.

THIRD YEAR.

CHAUCER AND RHETORIC.

MONDAY, APRIL 9TH:—MORNING, 9 TO 12.

Examiners,..... { CHAS. E. MOYSE, B.A.
PAUL T. LAFLEUR, M.A.

(Write the answers to A and B on separate bundles of paper.)

A

1. Discuss the relations existing between English and Anglo-Norman between the Conquest and Chaucer, and refer to early writers who have touched on the subject.

2. Compare the Canterbury Tales with the Decameron, and say what you know about *Historia Septem Sapientum Romæ*.

3. Sketch the portrait of the Frankeleyn or the Sompnour.

4. Scan the following lines and say of whom each is written:

(*a*) Ful lowde he sang, Com hider, love, to me

(*b*) His tythes payede he ful faire and wel

(*c*) Wel knew he the olde Esculapius

(*d*) Wel semede each of hem a fair burgeys

(*e*) Yet hadde he but litel gold in cofre

(*f*) A lovyere and a lusty bacheler

(*g*) His heed was balled and schon as eny glas

(*h*) In sangwin and in pers he clad was al

(*i*) They were adrad of him as of the dethe

(*j*) In termes hadde he caas and domes alle

5. Write on the following words and say where each occurs : chyvalrye, siege, dresse, tretys, somdel, steepe, taille, marshal, carpe.

6. Select Chaucerian forms of common English words, and use them to throw light on the development of our language.

B.

1. Explain fully and illustrate, Mixed Metaphor, Irony, Parody, Onomatopœia, Innuendo, Tautology, Solecism.

2. Give the substance of the remarks upon Rhythm.

3. What are the principal rules to be observed in the construction of the Paragraph. Refer to any example of a well constructed paragraph, *not* mentioned in the lectures.

4. Why is there any difficulty in establishing universal canons of Sound Taste ?

5. Write out the rules of Exposition.

6. What is the value of an argument based upon analogy ? Prove your statement by citing an original example.

7. State clearly the fundamental differences between Classic and Modern Tragedy.

8. What distinction has been drawn between the Novel and the Romance ?

(N.B.—Questions (7) and (8) are to be answered at some length. Special attention is also to be paid to style, for excellence in which additional marks will be allowed.)

B.A. EXAMINATION IN EUROPEAN HISTORY.

MONDAY, APRIL 9TH :—AFTERNOON, 2 TO 5.

Examiner,.....CHAS. E. MOYSE, B.A

[Not more than ten questions are to be answered.]

1. Mention the early seat of the Vandals, notice their dealings with the Empire, and their migration.

2. Give some account of the Ghaznevid Turks. How does Togrel Beg enter into the history of the Eastern Caliphate ?

3. Were the conquests of Karl the Great ephemeral ? Expose some popular misconceptions of regarding him.

4. Notice some features of the Crusade of Frederick II.

5. Trace the broad outlines of the history of the Empire of the East from the ninth century to its extinction.

6. Write a few notes on each of the following: Bari, Legnano, Morat the Sicilian Vespers, Canossa, Zara, the Golden Bull, Mayors of the Palace.

7. Notice the rise and decay of the Hanseatic League.

8. Describe the conquests of Bajazet.

9. Make notes on the Union of Calmar, the Third Estate, Rienzi, Savonarola, the Janizaries, the Donation of Constantine, Vinland.

10. Notice the leading ideas displayed in Dante's *De Monarchia*.

11. Illustrate the theory of the Mediæval Empire from Mediæval Art.

12. Examine the Empire's claims of jurisdiction over Denmark, France, Sweden, Spain and Venice.

HONOUR EXAMINATION IN MODERN LANGUAGES AND HISTORY.

THIRD YEAR.

Hallam:—*History of Middle Ages, Caps.* 1, 3, 5.

THURSDAY, MARCH 29TH:—2 TO 5 P.M.

Examiner,.....CHAS. E. MOYSE, B.A.

1. Sketch the military career of Clovis, and mention, but do not describe, the wars of Charlemagne.

2. Notice some leading features of the history of the Duchy of Burgundy.

3. Give an account of the government of Florence.

4. "But the most remarkable war," between Genoa and Venice, "commenced in 1378. Genoa did not stand alone in this war." Describe its course and its result.

5. Make notes on the Sicilian Vespers; the Taborites; the Knights of the Teutonic Order; the White Company; the Catapan.

6. "The principalities of Germany in the fourteenth and fifteenth centuries shrink to a more and more diminutive size." Why? Give an account of the constitution and functions of the Imperial Chamber.

HONOURS IN MODERN LANGUAGES AND HISTORY.

THIRD YEAR.

Green, History of the English People (Eliz. and Chas. II.) Macaulay, vol. I., cap. I.

TUESDAY, APRIL 3RD:—MORNING, 9 TO 12.

Examiner,.....CHAS. E. MOYSE, B.A.

1. Notice the character and aim of Matthew Parker and of Thomas Cartwright.

2. Sketch the leading features of Scotch history from the landing of Mary Stuart to the murder of Darnley.

3. Give an account of the English attempt in the Spanish Peninsula in 1589.

4. Divide the reign of Charles II. into periods, and narrate the course of Home affairs during any one of them.

5. How does Macaulay treat :

(1) The separation of England and Normandy.

(2) The character of the English aristocracy.

(3) Monopolies.

B.A. ADDITIONAL AND HONOURS.

AND HISTORY.

Pope : Essay on Criticism; Essay on Man. *Buckle*, Hist. of Civilization.

SATURDAY, MARCH 31ST :—MORNING, 9 TO 12.

Examiner,.....CHAS. E. MOYSE, B.A.

1. Display Pope's treatment of these subjects : (*a*) Imitative poetry, (*b*) the qualities of the writing of Horace, *Dionysius*, *Quintilian*, and *Longinus*. Mention the works of the authors underlined. Notice Pope's reference to a critic and the verse of a Lord.

2. Briefly estimate the place of the Essay on Criticism in our Literature.

3. Give an outline, not exceeding a page and a half in length, of the argument of the Essay on Man, and let your statements aim at showing its unity and relativity.

4. Far as Creation's ample range extends,
The scale of sensual, mental powers ascends :

How is that statement illustrated?

5. Give a short quotation, illustrating some belief treated in the body of any one of the Epistles (except the First), and state, but do not quote, its connection with the argument which immediately precedes and that which immediately follows.

6. Comment on these allusions and say where each occurs; godlike Turenne ; sure as Demoivre ; Macedonia's madman ; Gripus.

7. Wealth depends on soil ; glance at Asia and Africa by way of proof. Contrast Europe.

8. How does its configuration bear on the civilization of Mexico?

9. Contrast the physical features of India and Greece. Give, without proof, two leading propositions to which that contrast lends support.

10. Indicate the character of Phillip II., and the attitude of the Spaniards towards him.

B.A. ADDITIONAL.

Anglo-Saxon. Sweet: *Anglo-Saxon Reader.*

FRIDAY, APRIL 20TH:—MORNING, 9 TO 12.

Examiner,.....CHAS. E. MOYSE, B.A.

1. Translate:—

A. Ohthere and Wulfstan, l. 149 to end.
B. Anglo-Saxon Chronicle, ll. 97-118.
C. Battle of Maldon, ll. 106-126; ll. 265-279.

2. Give the principal parts of the following verbs: Sceolon, habbath, forbærned, cuman, genumen, rideth, motan, byrth, alecgath, oferfroren. Write out the past tense of the indicative and the whole of the subjunctive of genumen and oferfroren.

3. Make notes on the syntax of syfan elna, syxa sum, he sæde thæt Northmanna land wære swythe lang; on sutheweardum thæm lande; ealle tha hwile he sceal seglian.

4. Make notes on æt Hæthum—hranas, hund, twelftig, foregisla, gewaldenum, gewinnan.

5. Give the modern names of Exanceaster, Hrofesceaster, Meresig, Cisseceaster, Legaceaster, Hamtunscir, Winteceaster.

6. Give the gender of ar, ord, mearh, fetha, bur—thegn, healf, and decline the last two.

7. Decline til and conjugate beon.

8. Give the cardinal and the ordinal numbers from one to twelve.

B.A. ADDITIONAL.

Spenser; *Færie Queene, Bk. I.*; Tennyson; *In Memoriam.*

WEDNESDAY, APRIL 18TH:—MORNING, 9 TO 12.

Examiner,.....CHAS. E. MOYSE, B.A.

1. That adventure, where beginneth the first booke, viz.:

"a gentle Knight was pricking on the playne."

What happened previously?

2. Refer each of the following quotations to its place in the poem:

(*a*) Such endlesse richesse, and so sumptuous shew;
Ne Persia selfe, the nourse of pompous pride,
Like ever saw;

(*b*) His dwelling is low in a valley greene,
Under the foot of Rauran mossy hore.

(*c*) Both Silo this, and Jordan, did excell,
And th' English Bath, and eke the German Spau.

(*d*) And Sisyphus an huge round stone did reele
Against an hill, ne might from labour lin.

(*e*) And in her right hand bore a cup of gold,
With wine and water fild up to the hight.

(*f*) Whereof Georgos he gave thee to name.

(*g*) And in his hond a burning brond he hath,
The which he brandisheth about his hed.

(*h*) A bold bad man, that dar'd to call by name
Great Gorgon, Prince of darknesse and dead night.

(*i*) In which a rusty knife fast fixed stood,
And made an open passage for the gushing flood

(*j*) Nine hundred Pater Nosters every day
And thrice nine hundred Aves she was wont to say.

3. Describe what takes place when the Red Cross Knight is led to heavenly Contemplation.

4. Give the meaning (and nothing else) of the following expressions: bushy teade; so much agraste; mighty brawned bowrs; the bitter baleful stound; he chalenged essoyne; gins to avale; the argument of mine afflicted stile; Cleopolis is red.

5. Mention ten of the leading characters in the first book (do not repeat any portions of previous answers) and give a *very* brief quotation regarding some prominent aspect of each.

6. Give a few (say five) specimens of classical usage, and refer to (but do not quote) a few passages in which Spenser follows Ariosto or Tasso.

7. Mention a work of Petrarch and monodies in our Literature which are frequently compared with *In Memoriam*. Why does such comparison fail to interpret?

8. (*a*) Arrange the following subjects (take the first mention where there are several) in the order of the poem's development, and attach to each some *one* of the poet's thoughts about it; (*b*) place them in leading divisions: Universalism; the intermittent character of grief; the personification of grief; the religious beliefs of man and woman; the intervital state; the emotions not swayed by phenomena; the antagonism between God and Nature; the belief in immortality based on Revelation; the clearest definition of spiritual form; Absorption; the last walk in the garden; the succession of generations.

9. Write on the Wordsworthian tone of *In Memoriam*.

10. Mention the chronological sections of the poem, and indicate, in the briefest way, the character of each. Notice the poet's definitions of *In Memoriam* and say where each occurs.

11. Explain the following terms,—non-chronological landmarks, sections of objection, sections of universality. Give an instance of each.

B.A. HONOURS.

Campbell, *Pleasures of Hope:* Villiers, *Rehearsal.*

MONDAY, APRIL 2ND :—MORNING, 9 TO 12.

Examiner,.....CHAS. E. MOYSE, B.A.

1. What other poems in our Literature does the title of Campbell's poem suggest? When was the Pleasures of Hope published?

2. Examine the Pleasures of Hope in regard to (*a*) domestic life, (*b*) allusions to tradition.

3. Quote ten separate lines that seem to you especially good, and let them display the various moods of the poem. Say where each occurs. (Do not repeat any quotations you may have made in answer to the previous question.)

4. State what you consider to be the leading merits and defects of the poem, and illustrate by definite reference or brief quotation.

5. What other well-known play in our literature is similar in idea to the Rehearsal? When was the Rehearsal published?

6. Mention what you have found to be the leading elements in the construction of the Rehearsal.

7. Write briefly on the wit of the Rehearsal. Select two episodes which you think are in the author's best vein, and enter into detail concerning them.

8. Select any six of the Restoration dramatists who are satirized, and mention a play of each. What references are made to the Elizabethans?

9. What was the character of Villiers? Where did "Bayes" take his revenge?

10. Trace the Two Kings through the play.

B.A. HONOURS.

Tennyson: *Coming of Arthur, Gareth and Lynette, Holy Grail; Passing of Arthur.* Shelley: *Adonais.*

WEDNESDAY, APRIL 4TH :—MORNING, 9 TO 12.

Examiner,.....CHAS. E. MOYSE, B.A.

1. Give the allegorical meaning of *Arthur*, Guinevere, the *heathen horde*, the Lady of the Lake, *the three Queens.* Quote a brief passage which you think best discloses the allegory underlying the names in italics. What does Excalibur signify? What was its last stroke? Describe it as in the Coming of Arthur.

2. (*a*) Unfold the allegory of Gareth and Lynette.

(*b*) Show in tabular form how Tennyson has deviated from Malory in regard to the order, colour, and names of the knights, and use the same form to indicate other differences between the poem and the old romance.

3. Mention the Arthur Literature ascribed to Robert de Borron and Walter Map. How did the Holy Grail become connected with the Arthur-saga?

4. (*a*) Give an outline of the *Coming of Arthur* until Arthur sees Guinevere.

(*b*) "I burst the chain, I sprang into the boat." Give the sequel.

(*c*) "I found him in the shining of the stars." Give the substance of the speech.

5. Say where the following extracts occur, and in what connection;

(*a*) but the scholar ran
Before the master.

(*b*) obedience is the bond of rule.

(*c*) And cipher face of rounded foolishness.

(*d*) So like a painted battle the war stood
Silenced.

(*e*) God make thee good as thou art beautiful.

6. What elements has Adonais *in common with* In Memoriam; quote from *Adonais* in proof.

7. Criticize the poetry of Adonais, and in conclusion quote passages relating to Rome.

B.A. HONOURS.

Freeman: *Growth of the English Constitution.*

SATURDAY, APRIL 7TH:—AFTERNOON, 2 TO 5.

Examiners, ... { CHAS. E. MOYSE, B.A.
PAUL T. LAFLEUR, M.A.

1. Give the substance of Freeman's remarks on *Comitatus*, the conversion of *folcland* into *Terra Regis*, and the essential nature of the House of Lords.

2. Describe with some detail two changes of later times in the English Constitution, and shew that respect for precedent prevailed in the changes.

3. Explain fully the origin, the powers, and the responsibility of the Cabinet.

4. On what grounds is it declared that "there is no nobility in England?"

5. Simon de Montfort is called "the founder of the House of Commons." Justify this statement.

B.A. HONOURS.

SHAKESPEARE.

Love's Labour's Lost; A Midsummer Night's Dream; Hamlet.

WEDNESDAY, APRIL 11TH:—MORNING, 9 TO 12.

Examiner,.....CHAS. E. MOYSE, B.A.

1. What internal evidence is there of the time when A Midsummer Night's Dream was written?

Examine one leading aspect of the Fairy world of the play.

2. Select from what Ophelia says (or does) or what is said of her in the play, *brief* expressions which enable you to form your idea of her character. Quote (or refer to) these on the left hand page of your paper, and then write in carefully chosen language the character you have formed.

3. Write an essay on Euphuism, with especial reference to Love's Labour's Lost.

4. Illustrate from the three plays leading differences between Shakesperian and modern English. (Write in the first person, and group your points carefully; also let the play bear concurrent testimony when you can.)

B.A. HONOURS

More; *Utopia* Arnold; *Essays in Criticism* (the Second).

SATURDAY, APRIL 14TH:—AFTERNOON, 2 to 5.

Examiner,.....CHAS. E. MOYSE, B.A.

1. To whom was the first English translation of *Utopia* dedicated, and when did it appear?

2. Explain the following references:

(*a*) "The iii last voyages of those iiii that be nowe in printe, and abrode in every mannes handes;" (*b*) John Clement, my boye; (*c*) the insurrection, yat the Westerne English men made agaynst their king; (*d*) Tricius Apinatus; (*e*) George Tadlowe.

3. Give the substance of what is said in connection with the following topics:

(*a*) the decrees of the Achoriens and the law of the Macariens.

(*b*) France is troubled and infected with a much sorer plague.

4. Show by reference to legislation that *Utopia* reflects its time.

5. Give on outline of the chapter "of Sciences, Craftes and Occupations."

6. How are (*a*) the successors of Newton and Leibnitz, and (*b*) the influence of newspapers, criticized?

7. What defect did Addison show? Give the ideas expressed in passages from Jeremy Taylor and Bossuet, which are compared.

8. Comment on the following:—Corneille's Cid; "It is an Englishman, be surprised at no extravagance."

B.A. HONOURS.

HISTORY.

(*Guizot and Macaulay.*)

MONDAY, 16TH APRIL MORNING, 9to 12.

Examiners,..... { CHAS. E. MOYSE, B.A. / PAUL T. LAFLEUR, M.A.

1. Discuss the meanings which may be attached to the word *Civilization*, and discriminate in favor of one of them.

2. What is meant by the phrase "political legitimacy?" Support the statement, that all systems claim this legitimacy.

3. What prevented feudalism from becoming regularly and perfectly organized? Shew that this difficulty ultimately led to the decay of the system.

4. Make brief comments upon:—the theocratical church, the enfranchisements of the boroughs, the Great Schism, the weak side of the Reformation, the centralization of power in European kingdoms.

5. Examine the general character of the Crusades, their causes, and their effects upon the civilization of Europe.

6. What are the principal points in connection with the military organisation of England in 1685?

7. Give a general idea of the state of agriculture in the reign of Charles II.

8. Give, in substance, Macaulay's remarks on the state of the country clergy.

B.A. HONOURS.

Early English; Morris and Skeat, extt. X.-XX.

THURSDAY, APRIL 19TH:—MORNING, 9 TO 12.

Examiner,.....CHAS. E. MOYSE, B.A.

1. Translate:—

A. William of Palerne, ll. 232-250.
B. Alliterative Poems, ll. 513-514.
C. Piers the Plowman, p. 198, ll. 1-27.
D. John of Trevisa (B.) ll. 112-129.

2. Give the meaning of the following expressions: my fon days sere; his hare moutes; thei etteleden sone; me whatez withinne; dernly him one; agrethed ful riche; ilk a synoghe and lith; he shuld for ferdnes titter it fle; ledes lozen in that lome; no neiz; godez glam to hem glod; ac his wit welt he; and how waxes it domland; nozt dowed; he wold wayte hire sum wicked torn; gurdeth of gyles hed; of burnes y-clepud; lacching of ziftus; rechep thorw Regratorie; And he war bodyn all evenly; their hawyng; vounder will of vayn; O welful auter; hir medicine is for to triste; thy diurnal sweigh.

3. Give an outline of what John of Trevisa Higden says *De incolarum linguis.*

4. Notice differences between N. and S. dialects in regard to noun-inflections and personal pronouns.

B.A. HONOURS.

Anglo-Saxon; *Beowulf and Vespasian Hymns.*

SATURDAY, APRIL 21ST:—MORNING, 9 TO 12.

1. Translate from Beowulf:

A ll. 53-68.

B ll. 210-224.

C ll. 320-331.

D ll. 535-548.

2. Give the principal parts of the strong verbs in extt. C and D, and comment on words in D that seem to you noteworthy.

3. (*a*) Translate the Second Vespasian Hymn, i c, ondettu.....Israel.

b) Notice the various dialectal forms that occur in it.

INTERMEDIATE EXAMINATION.

LOGIC.

TUESDAY, 17TH APRIL:—MORNING, 9 TO 12.

Examiners,..... { REV. J. CLARK MURRAY, LL.D.
PAUL T. LAFLEUR, M.A.

1. Define *Logic*, and justify the definition.

2. Give the logical characteristics of the following terms:—Art, the Dominion of Canada, orthodoxy, injudicious, idle, sun, minster, deity.

3. Explain clearly the difference between the Proprium and the Accidens, and give full illustration.

4. What is a Proposition? How many kinds of Propositions are there, considered according to the form in which they are expressed?

5. State clearly what is meant by Distribution as applied to Terms, anp the conditions of Distribution in the Terms of a Proposition.

6. What is the Square of Opposition? Give all the relations in Opposition of;—

An honest man's the noblest work of God.
All is vanity.
There was never anything ugly or mis-shapen but the chaos.
No thorns go as deep as a rose's.

7. Write the three Primary Laws of Thought, and explain briefly the purpose of any one of them.

8 Express the following in syllogistic form, describe by mood and figure, and reduce if necessary :—

(*a*) He who is a slave to passion cannot be truly free; and therefore the miser is not truly a free man.

(*b*) These pupils do not deserve any reward, for they have done no more than their duty, and the feelings of a satisfied conscience should be quite enough for them.

9. Explain fully and illustrate one Formal, and one Material, Fallacy.

10 Test the validity of the following:—

(*a*). If this man has had a great deal of experience he is a good workman; but he has not had much experience, and therefore he cannot be a good workman.

(*b*). No one thinks of attaching importance to what B says, for he is hasty in his judgments, and hasty judgments are almost invariably incorrect.

(*c*) If a substance is solid it possesses elasticity, and so also it does if it be liquid or gaseous; but all substances are either solid, liquid, or gaseous, therefore all substances possess elasticity.

(*d*) No rulers will do that which produces pain to themselves; but the unfavourable sentiments of the people will give pain to them; therefore, no rulers will do anything to excite the unfavourable sentiments of the people.

THIRD YEAR ADDITIONAL.

MURRAY'S HANDBOOK OF PSYCHOLOGY.

FRIDAY, 13TH APRIL;—MORNING, 9 TO 12.

Examiner,.....J. CLARK MURRAY, LL.D.

1. Describe the order in which the principal kinds of Cognition are naturally evolved.

2. Explain what is meant by the Distinct Representability of a sensation, and show that Tastes stand low in regard to this quality.

3. Explain any of the Perceptions of Hearing.

4. Prove that there are always two retinal images in binocular vision, and explain their function in Visual Perception.

5. Describe, in general outline, the process of Generalisation.

6. Explain either the Speculative or the Practical (Ethical) Ideal.

7. Distinguish Hallucination, Illusion, and Fallacy.

8. Explain the apparent contradictions that arise in applying the notions of Space and Time.

THIRD YEAR HONOURS.

FRASER'S SELECTIONS FROM BERKELEY.

THOMSON'S OUTLINES OF THE LAWS OF THOUGHT.

MONDAY, 23RD APRIL:—MORNING, 9 TO 12.

Examiner,.....J. CLARK MURRAY, LL.D.

I. BERKELEY.

1. State the general doctrine of the *Principles of Human Knowledge*.

2. Answer any two of the following objections to the doctrine:—(*a*) Things are seen outside of, or at a distance from us, and cannot therefore be *in* the mind; (*b*) Things must, on this doctrine, be every moment annihilated and created anew; (*c*) If extension exists in the mind, then the mind must be itself extended; (*d*) If matter and motion are taken away, the principles of mechanics are undermined; (*e*) On this doctrine, what is not seen and felt,—*e. g.*, the other side of the moon or the centre of the earth,—cannot exist.

3. Sketch either the New Theory of Vision, or the doctrine of Visual Language, and its application to prove the existence of God.

4. Explain what Causality and the Laws of Nature mean, according to Berkeley.

II. THOMSON.

1. Explain the four functions of language.

2. Take two terms from this question, and interpret each in reference to the three powers of conception.

3. Show how the four Predicables of Aristotle can be reduced to two Predicable-classes.

4. Give Thomson's Table of Judgments with concrete examples.

5. State either Thomson's doctrine of the Opposition of Propositions, or the Canon of Mediate Inference with the Special Canons of the different Figures.

6. "The comparison of each of the two terms must be either with the whole, or with the same part, of the third term." Explain the various ways in which this may be done.

THIRD YEAR HONOURS.

CICERO'S DE NATURA DEORUM

AND

GREEK PHILOSOPHY.

TUESDAY, 24TH APRIL :—MORNING, 9 TO 12.

Examiner,.....J. CLARK MURRAY, LL.D.

1. Sketch in general outline the course of the dialogue in *De Natura Deorum*.

2. State the main points in the Theology either of the Epicureans or of the Stoics.

3. Sketch the Stoical argument to prove the existence of God.

4. "Summa vis infinitatis magna ac diligenti contemplatione dignissima est; in qua intelligi necesse est, eam esse naturam, ut omnia omnibus paribus paria respondeant. Hanc *ισονομίαν* appellat Epicurus, id est, equabilem tributionem." Translate, and explain the application of the doctrine referred to in the Epicurean Theology.

5. "Alia quoque ex ratione, et quidem physica, magna fluxit multitudo deorum, qui induti specie humana fabulas poetis suppeditaverunt, hominum autem vitam superstitione omni referserunt. Atque hic locus, a Zenone tractatus, post a Cleanthe et Chrysippo pluribus verbis explicatus est." Explain the doctrine referred to, and tell what you know of the three philosophers mentioned.

6. Sketch the course of speculation during the first period mentioned in the lectures.

7. Sketch the Logic or the Physics or the Ethics either of Plato or of Aristotle.

8. Distinguish three periods in the history of ancient Scepticism, and give some account of one thinker belonging to any.

B.A. ORDINARY EXAMINATION.

MENTAL AND MORAL PHILOSOPHY.

CALDERWOOD'S MORAL PHILOSOPHY.

THURSDAY, 5TH APRIL :—MORNING, 9 TO 12.

Examiner,.....J. CLARK MURRAY, LL.D.

1. Explain the terms, Ethics and Moral Philosophy, and the sphere of the science they denote.

2. "The actions possessed of moral quality are the actions of intelligent agents." Explain fully the purport of this statement.

3. State fully either the Intuitional or the Development Theory of the knowledge of moral distinctions.

4. Write a note on the question :—Can conscience be educated ?

5. State the Utilitarian Theory of Obligation.

6. Discuss the distinction drawn between different kinds of Obligation.

7. State the different theories on the nature of the Will.

8. What is the relation of morality to religion ?

B.A. ORDINARY EXAMINATION.
MENTAL AND MORAL PHILOSOPHY.
ROGERS' POLITICAL ECONOMY.

THURSDAY, 5TH APRIL :—AFTERNOON, 2 TO 5.

Examiner,.....J. CLARK MURRAY, LL.D.

1. Describe the effects of the Division of Labour.

2. Discuss any one of the following subjects :—a Double Currency, a Debased Coinage, an Inconvertible Currency.

3. Explain the origin and employments of Capital.

4. Who are the three classes among whom the price of a commodity is distributed ?

5. Write a note on Malthus' Theory of Population.

6. Explain either the nature of Rent, or the Law of Supply and Demand.

7. Define Interest, Profit and Discount.

8. Distinguish the two systems of Taxation, and state their respective advantages and disadvantages.

B.A. ADDITIONAL.
LORIMER'S INSTITUTES OF LAW.

FRIDAY, 20TH APRIL :—MORNING, 9 TO 12.

Examiner,.....J. CLARK MURRAY, LL.D.

1. Distinguish the different schools of Jurisprudence.

2. Explain Lorimer's theory of Conscience.

3. Explain the statement, that "all human laws are, properly speaking, declaratory."

4. Distinguish the principal meanings which have been attached to the distinction between Perfect and Imperfect Obligations ; and explain Lorimer's doctrine on the subject.

5. Explain the relation (*a*) of Order and Liberty, (*b*) of Liberty and Equality.

6. Distinguish the Primary and Secondary Sources of Positive Law, and give a detailed statement of the latter.

B.A. ADDITIONAL.

MODERN PHILOSOPHY.

MONDAY, 23RD APRIL:—MORNING, 9 TO 12.

Examiner,.....J. CLARK MURRAY, LL.D.

1. Name, in historical order, the principal representatives both of Realism and of Idealism, prior to Kant.

2. Sketch the philosophy either of Hobbes or of Locke.

3. Describe the influence of Locke's Empiricism upon moral and religious speculation in England.

4. Give some account of any two of the following:—Gassendi, Condillac Bonnet, Helvetius, the Encyclopedists.

5. Explain the doctrine of Occasionalism and its connection with the philosophy of Descartes.

6. Give some account of the system of any two of the following philosophers:—Descartes, Spinoza, Leibnitz, Wolff, Kant.

B.A. HONOURS.

DESCARTES' METHOD AND MEDITATIONS.

SPINOZA'S ETHICS.

THURSDAY, 29TH MARCH:—2 TO 5 P.M.

Examiner,.....J. CLARK MURRAY, LL.D.

1. Give an outline either of the Method or of the Meditations of Descartes.

2. Give Spinoza's definitions of *Causa sui* and *Deus*.

3. Prove and explain either of the following propositions:—(*a*) Deus est omnium rerum causa immanens, non vero transiens (I. 18); (*b*) Voluntas non potest vocari causa libera, sed tantum necessaria (I. 32).

4. Distinguish *imaginatio*, *ratio*, and *scientia intuitiva*.

5. Distinguish (*a*) adequate and inadequate or partial causes, (*b*) action and passion.

6. Explain the propositions:—(*a*) Summum mentis bonum est Dei cognitio, et summa mentis virtus Deum cognoscere (IV. 28); (*b*) Summus mentis conatus summaque virtus est res intelligere tertio cognitionis genere (V. 25).

B.A. HONOURS.

ARISTOTLE'S NICOMACHEAN ETHICS.

MONDAY, 2ND APRIL :—MORNING, 9 TO 12.

Examiner,.....J. CLARK MURRAY, LL.D.

1. State Aristotle's division of the Soul.

2. Explain the distinction between Moral (Ethical) and Intellectual (Dianoetic) Virtue.

3. Explain the definition of Moral Virtue, illustrating by an example.

4. Explain the distinction between the different kinds of Justice.

5. Distinguish the five intellectual habits that make up Intellectual Virtue.

6. Distinguish the three forms of evil that are to be avoided, along with their several opposites.

7. Describe the different political constitutions, with the corruption to which each is liable.

8. Explain Aristotle's theory of Pleasure.

B.A. HONOURS.

SPENCER'S FIRST PRINCIPLES.

SATURDAY, 7TH APRIL :—MORNING, 9 TO 12.

Examiner,.....J. CLARK MURRAY, L.L.D.

1. Explain, from Spencer's point of view, one of the following subjects :—(*a*) Ultimate Religious and Ultimate Scientific Ideas ; (*b*) Relativity of Knowledge ; or (*c*) Reconciliation of Religion and Science.

2. Explain either the definition of Philosophy or its data.

3. State and prove any two of the corollaries from "that primordial truth which transcends all proof."

4. Distinguish Evolution and Dissolution, or Simple and Compound Evolution.

5. Explain the Law of Evolution in its complete formula.

6. Sketch the outlook described as the result of Equilibration.

B.A. HONOURS.

THE PHILOSOPHY OF KANT.

WEDNESDAY, 11TH APRIL :—MORNING 9 TO 12.

Examiner,..... J. CLARK MURRAY, L.L.D.

1. Explain the General Problem of Pure Reason.

2. Distinguish (*a*) Transcendental Æsthetic and Logic, (*b*) Transcendental Analytic and Dialectic.

3. Connect the Categories with the Judgments from which they are severally derived, or the Principles (Ground-Judgments) of Pure Understanding with the corresponding Categories.

4. Give the System of Transcendental Ideas.

5. Sketch the solution of the Antinomy of Pure Reason, or the Critique of the Arguments for the Existence of a Supreme Being.

6. Give an outline either of the Kritik of Pure Practical Reason, or of the Kritik of Judgment..

B.A. HONOURS.

OUTLINE OF HAMILTON'S PHILOSOPHY.

MONDAY, 16TH APRIL :—MORNING, 9 TO 12.

Examiner,.....J. CLARK MURRAY, LL.D.

1. Explain the place of Phenomenal Psychology in the classification of the philosophical sciences.

2. What is the limit of doubt in regard to the facts of consciousness

3. Distinguish the different Faculties of Knowledge.

4. Explain fully either the distinction between Sensation and Perception, or the threefold classification of the Qualities of Matter.

5. State either the argument for the existence of latent mental states, or the Laws of Reproduction.

6. Explain fully Hamilton's theory of Causality and Freedom.

B.A. HONOURS.

MILL'S SYSTEM OF LOGIC.

WEDNESDAY, 18TH APRIL :—MORNING, 9 TO 12.

Examiner,.....J. CLARK MURRAY, LL.D

1. Compare Mill's Table of the Categories with those of Aristotle and of Kant; or discuss his theory of Reasoning; or compare his doctrine regarding the first principles of Geometry with Kant's.

2. Compare Mill's doctrine of Causality with Kant's.

3. Describe and illustrate either the Deductive Method, or the different modes of explaining the Laws of Nature.

4. Explain either the requisites of a Philosophical Language, or the classification of the Fallacies.

5. State the doctrine of Philosophical Necessity, as understood by Mill.

6. Explain fully the Method alone applicable to Social Science.

B.A. HONOURS.

MAINE'S ANCIENT LAW.

TUESDAY, 24TH APRIL :—MORNING, 9 TO 12.

Examiner,.....J. CLARK MURRAY, LL.D.

Write a note on any three of the following subjects :—History of the Doctrine of a Law of Nature ; Early History of Testamentary Succession ; Early History of Property ; Early History of Contract ; Early History of Delict and Crime.

FRENCH.

FIRST YEAR.

FRIDAY, APRIL 13TH :—MORNING, 9 TO 12.

Examiner,..... P. J. DAREY, LL.D.

Translate into English :

1. Pour moi, je vous l'avoue, je me repais un peu de gloire. Les applaudissements me touchent, et je tiens (*a*) que dans tous les beaux arts, c'est un supplice assez fâcheux que de se produire à des sots, que d'essuyer, sur des compositions, la barbarie d'un stupide. Il y a plaisir, ne m'en parlez point, à travailler pour des personnes qui soient (*b*) capables de sentir les délicatesses d'un art, qui sachent (*c*) faire un doux accueil aux beautés d'un ouvrage, et, par de chatouillantes approbations, vous régaler de votre travail. Oui la récompense la plus agréable qu'on puisse recevoir des choses que l'on fait, c'est de les voir connues, de les voir caressées (*d*) d'un applaudissement qui vous honore. Il n'y a rien, à mon avis, qui nous paie mieux que cela de toutes nos fatigues ; et ce sont des douceurs exquises que des louanges éclairées.

MOLIÈRE, *Le Bourgeois gentilhomme*, *A. I.*, *s.* 1.

2. *a*, *b*, *c*, What are the tenses of those verbs? Write also the *Future* the *Imperfect Indicative*, the *Imperfect Subjunctive* and the *Past Subjunctive* of the same verbs. What part of speech is *caressées?* *d*, Why is it thus written?

3. Write a short sketch of the character of Mr. Jourdain, and of Madame Jourdain.

4. What do you call a primitive tense and what a derivative tense? Are Future, Imperative, and Subjunctive present primitive or derivative? If primitive what tenses do they form ; if derivative from what tenses are they formed, and how?

5. What auxiliary do neuter verbs generally take? Write six exceptions.

6. Translate into French in two different ways : *My friend must have books ; I must have money for my travels this summer.* Explain fully how must is to be translated.

7. State the rules to form the plural of foreign words. Give examples.

8. Translate into French : The sidewalks are very bad, they are covered with snow. There are many booksellers in Montreal.

9. How many classes of adverbs are there ? Name them with examples.

10. Translate into French :

Those who speak without reflection are exposed to many errors. Many poor people live on bread and potatoes only. The curfew was introduced in England by William the Conqueror. They have sung in that church beautiful hymns. He gave us before parting several signatures on blank paper. A Roman history, from the foundation of Rome to the destruction of the Roman Empire. His income is two thousand dollars a year. His father was a merchant. Did you enjoy yourself very much ? No, not much, it was too warm, and the heat often gives me a headache. That child behaves himself very well. We are born in this world to prepare ourselves for a better one.

INTERMEDIATE EXAMINATION.

FRIDAY, APRIL 13TH :—MORNING, 9 TO 12.

Examiners,..... { P. J. DAREY, LL.D.
REV. CHS. TANNER.

1. Translate into English :

Le jour où, jeune encore, on revêt la puissance,
On grandit sous son poids ; pour secouer l'enfance,
Sur les degrés du trône il suffit d'un instant,
Et l'enfant couronné devient homme en montant.
Je suis plein d'avenir : Dieu dans ce corps débile
Avec un cœur de feu mit une âme virile.
Vous serez fier de moi, j'en ai le ferme espoir ;
Mais punir l'assassin est mon premier devoir,
Je vous le jure ici par les pleurs de mon père,
Plus il sera puissant, plus je serai sévère.
Rien ne peut, moi régnant, le soustraire au trépas ;
Rien, je le jure encore.

LES ENFANTS D'EDOUARD, *Acte II., Scène VI.*

2. Translate into English :

Mon père,
Cessez de vous troubler, vous n'êtes point trahi : (1)
Quand vous commanderez (2) vous serez obéi,
Ma vie est votre bien ; vous voulez le reprendre :
Vos ordres sans détours pouvaient (3) se faire entendre.
D'un œil aussi content, d'un cœur aussi soumis
Que j'acceptai l'époux que vous m'aviez promis,

Je saurai, s'il le faut, victime obéissante,
Tendre au fer de Calchas une tête innocente ;
Et, respectant le coup par vous-même ordonné,
Vous rendre tout le sang que vous m'avez donné
Si pourtant ce respect, si cette obéissance
Paraît digne à vos yeux d'une autre récompense ;
Si d'une mère en pleurs vous plaignez les ennuis,
J'ose vous dire ici qu'en l'état où je suis,
Peut-être assez d'honneurs (4) environnaient ma vie
Pour ne pas souhaiter qu'elle me fût ravie,
Ni qu'en me l'arrachant, un sévère destin,
Si près de ma naissance, en eût marqué la fin.

IPHIGÉNIE, *Acte IV, Scène IV.*

3. (1) *trahi* by whom?

(2) *commanderez* what?

(3) What part of the verb is *pouvaient*? Give in full the Present Indicative, Past Definite and Past Participle of that verb.

(4) What honneurs?

4. Relate fully the circumstances which caused Iphigénie to speak the above extract.

5. How and with what does the Past Participle agree when not preceded by an auxiliary? How and with what does the Past Participle agree when conjugated with one of the auxiliary *avoir* or *être*?

6. Write correctly the following Past Participles, to illustrate the preceding rules:

La Reine d'Angleterre, *aimé* de ses sujets comme elle l'est, doit être bien heureuse. J'ai *écrit* quatre lettres que j'ai *envoyé* à mes amis. Ces enfants se sont *vu*, mais ils ne se sont pas *parlé*. Les chaleurs qu'il y a *eu* l'été dernier ont *nui* à la végétation. Ces grands hommes que nous avons *vu* naître ont grandi parmi nous.

7. Give six cases in which the definite article is used in French and not in English.

8. State the difference between the sentences: *je crains qu'il ne pleuve* and *je crains qu'il ne pleuve pas*. How do you account for the *ne* in the sentences: Votre frère est plus jeune que je *ne* pensais. L'affaire est tout autre qu'on *ne* me l'avait racontée. After what other expressions is *ne* of that nature

9. Give a short sketch of the life of the following men: Pierre Corneille, Jean Racine, Jean de La Fontaine and Jacques Saurin.

In what kind of literature have they distinguished themselves? Name some of their principal works.

10. Relate the rise of the theatre in France. What is the satire Ménippée? Le Discours sur la Méthode? L'Institution de la Religion chrétienne? The Roman de la Rose? Who were their authors?

11. Translate into French :

"Nothing," replied the artist, "will ever be attempted, if all possible objections must be first overcome. If you will favor my project, I will try the first flight at my own hazard. I have considered the structure of all volant animals and find the folding continuity of the bat's wings most easily accommodated to the human form.

12. Upon this model I shall begin my task to-morrow, and in a year expect to tower into the air beyond the malice and pursuit of man. But I will work only on this condition, that the art shall not be divulged, and that you shall not require me to make wings for any but ourselves."

JOHNSON, *Rasselas.*

THIRD YEAR.

WEDNESDAY, APRIL 18TH :—MORNING, 9 TO 12.

Examiner,.....P. J. DAREY, LL.D.

Toutes les réponses devront être faites en français.

1. Traduisez en anglais :

Camille. Oui, je lui ferai voir, par d'infaillibles marques
Qu'un véritable amour brave la main des Parques, (1)
Et ne prend point de lois de ces cruels tyrans
Qu'un astre injurieux nous donne pour parens.
Tu blâmes ma douleur, tu l'oses appeler lâche,
Je l'aime d'autant plus que plus elle te fâche,
Impitoyable père, et par un juste effort
Je la (2) veux rendre égale aux rigueurs de mon sort.
En vit-on jamais un (3) dont les rudes traverses
Prissent en moins de rien (4) tant de faces diverses ?
Qui (5) fût doux tant de fois, et tant de fois cruel,
Et portât tant de coups avant le coup mortel ?
Vit-on jamais une âme (6) en un jour plus atteinte
De joie et de douleur, d'espérance et de crainte,
Asservie en esclave à plus d'événements
Et le piteux jouet de plus de changements ?

CORNEILLE, Horace, A. IV, Sc. IV.

2. Quand est-ce que Camille fit le discours ci-dessus ?

(1) Expliquez ce que cela veut dire : *brave la main des Parques.* Qui étaient les Parques ? Quel est l'étymologie de ce mot ? Pourquoi étaient-elles ainsi appelées ?

(2) A quoi se rapporte *la ?* (3) *Un* quoi ? Montrez la force de cette expression : *en moins de rien.*

(5) Quel est l'antécedent de *qui ?* (6) Comment expliquez-vous cet accent sur *âme ?*

3. Traduisez en français :

Being now resolved to be a poet, I saw everything with a new purpose; my sphere of attention was suddenly magnified; no kind of knowledge was to be overlooked. I ranged mountains and deserts for images and resemblances, and pictured upon my mind every tree of the forest and flower of the valley. I observed with equal care the crags of the rock, at the pinnacle of the palace. Sometimes I wandered along the mazes of the rivulet, and sometimes watched the changes of the summer clouds. To the poet nothing can be useless. Whatever is beautiful, and whatever is dreadful, must be familiar to his imagination: he must be conversant with all that is awfully vast, or elegantly little. The plants of the garden, the animals of the wood, the minerals of the earth, and the meteors of the sky must all concur to store his mind with inexhaustible variety.

JOHNSON, *Rasselas*, Ch. X.

4. Dans quel genre de littérature *Lacépède*, *Millevoye*, *Piron*, *Gresset*, *Le Sage*, *Mérimée*, *Le Franc de Pompignan*, *Thierry*, *Sainte Beuve*, *Mignet* se sont-ils illustrés ?

Dites ce que vous savez sur chacun de ces auteurs.

5. Qui est-ce qui a écrit les *Messéniennes*, *les Souvenirs du Peuple*, *les Feuilles d'automne*, *l'Hymne de l'enfant à son réveil*, *le Montagnard émigré*, *les Considérations sur la Révolution française*, *les Ruines*, *l'Introduction à l'Encyclopédie*, *les Entretiens sur la pluralité des mondes* ?

6. Translate into French :

That has nothing to do with me; you may do as you think proper, you are your own master. You will be obliged to work for some time, before you can save any money. That undertaking will greatly benefit you, I think. He asked me to agree to it in my father's name. He is a distant relation, of whom I never heard my father speak. When we were alone, he made me a sign to bolt the door, and to come near him. I do not see that we have any hope of working our way through the crowd.

COGERY, *third course in French.*

THIRD YEAR.

ADDITIONAL COURSE.

FRIDAY, APRIL 13TH :—MORNING, 9 TO 12.

Examiner,.....P. J. DAREY, LL.D.

1. Faites un résumé de la vie de Lafontaine. Qui étaient ses principaux amis à Paris? Quel était son caractère? quelles étaient ses lectures favorites?

2. Quels étaient généralement les sujets dont s'occupaient les écrivains du XVIIe siècle? LaFontaine faisait-il exception? Expliquez votre réponse.

3. Qu'est-ce que la Fable? Quel but se proposait LaFontaine dans ses fables.

4. Pourquoi les fables plaisent à tous les âges de la vie ?

5. Quelles sont, selon votre idée, les plus belles fables de LaFontaine ? Donnez la raison de ce choix.

6. Citez quelques proverbes pris dans les fables de LaFontaine.

7. Quelles leçons nous donnent : le Renard et le Bouc, la Laitière et le pot au Lait, la Tortue et les deux Canards, le Héron ; la Poule aux œufs d'or ?

8. Traduisez en anglais : ne t'en tiens qu'à toi-même ; ne vous déplaise ; par l'odeur alléché ; ne se sent pas de joie ; point de franche lippée, tout à la pointe de l'épée ; il ne tiendra qu'à vous ; force reliefs ; tant s'en faut ; prophète de malheur, babillarde, dit-on.

9. Dites de quelles fables de LaFontaine ces expressions sont tirées.

10. Combien de tragédies et de comédies Racine a-t-il écrites? Nommez-les. A-t-il écrit en prose ?

11. A quelle occasion a-t-il écrit les Plaideurs ?

12. Traduisez en anglais :

Léandre. Vous ne l'êtes que trop (malade). Donnez-vous du repos,
Vous n'avez tantôt plus que la peau sur les os.
Dandin. Du repos ! Ah ! sur toi tu veux régler ton père ?
Crois-tu qu'un juge n'ait qu'à faire bonne chère
Qu'à battre le pavé comme un tas de galants,
Courir le bal la nuit, le jour les brelans ?
L'argent ne nous vient pas si vite que l'on pense.
Chacun de tes rubans me coûte une sentence.
Ma robe vous fait honte. Un fils de juge ! Ah fi !
Tu fais le gentilhomme : hé ! Dandin, mon ami,
Regarde dans ma chambre et dans ma garde-robe
Les portraits des Dandins : tous ont porté la robe ;
Et c'est le bon parti. Compare prix pour prix
Les étrennes d'un juge à celles d'un marquis :
Attends que nous soyons à la fin de décembre.
Qu'est-ce qu'un gentilhomme ? Un pilier d'antichambre.
Combien en as-tu vu, je dis des plus huppés,
A souffler dans leurs doigts dans ma cour occupés,
Le manteau sur leur nez, ou la main dans la poche ;
Enfin, pour se chauffer, venir tourner ma broche ?

RACINE, *les Plaideurs*, A. I, S. IV.

13. Traduisez en français :

What Sophia's reflections were upon this occasion, I cannot pretend to determine, but I was not displeased at the bottom that we were rid of a guest for whom I had much to fear. Our breach of hospitality went to

my conscience a little : but I quickly silenced that monitor by two or three specious reasons which served to satisfy and reconciled me to myself. The pain which conscience gives the man who has already done wrong is soon got over. Conscience is a coward, and those faults it has not the strength to prevent it seldom has justice enough to accuse.

THE VICAR OF WAKEFIELD, *Chapter XIII.*

THIRD YEAR HONOURS.

TUESDAY, APRIL 24TH ;—MORNING, 9 TO 12.

Examiner, ... P. J. DAREY, LL.D.

1. D'où le sujet de la tragédie *Phèdre* de Racine est-il tiré ?

2. Faites un résumé du rôle de Phèdre dans cette tragédie et de celui d'Hippolyte.

3. Racontez le dénouement de cette tragédie.

4. Quels sont les éléments nécessaires d'une tragédie ? *Phèdre* les réunit-elle ?

5. Traduisez en anglais :

Ah ! que l'on porte ailleurs les honneurs qu'on m'envoie (*a*).
Importune (*b*), peux-tu souhaiter qu'on me voie ?
De quoi viens-tu flatter mon esprit désolé ?
Cache moi bien plutôt : je n'ai que trop parlé.
Mes fureurs (*c*) au dehors ont osé se répandre :
J'ai dit ce que jamais on ne devait entendre
Ciel comme il (*d*) m'écoutait ! Par combien de détours
L'insensible a longtemps éludé mes discours !
Comme il ne respirait qu'une retraite prompte !
Et combien, sa rougeur a redoublé ma honte !
Pourquoi détournais-tu mon funeste dessein
Hélas ! quand son épée allait chercher mon sein.
A-t-il pâli pour moi ? me l'a-t-il arraché ?
Il suffit que ma main l'ait une fois touchée
Je l'ai rendue horrible à ses yeux inhumains :
Et ce fer malheureux profanerait ses mains.

RACINE, *Phèdre*, A. III, Sc. I.

6. Qui est ce qui parle dans le morceau ci-dessus ?

a. De quels honneurs est-ce qu'il s'agit ?

b. Qui est cette importune ?

c. Quelles *fureurs ?*

d. A qui se rapporte ce pronom ?

7. Combien y a-t-il de chants dans *l'Art. poétique* de Boileau ?

8. Qu'est-ce qu'ils contiennent respectivement ? Quel est le seul genre de littérature dont Boileau ne parle pas dans son *Art poétique.*

9. Pouvez-vous citer quelques vers de l'*Art poétique*?

10. Traduisez en anglais:

O vous donc qui, brulant d'une ardeur périlleuse,
Causez du bel esprit la carrière épineuse (*a*),
N'allez pas sur des vers (*b*) sans fruit vous consumer,
Ni prendre pour génie un amour de rimer:
Craignez d'un vain plaisir les trompeuses amorces,
Et consultez longtemps votre esprit et vos forces.

11. (*a*) Quelle est cette *carrière épineuse*?

b. Traduisez les homonymes: vers, ver, verts, vers, verre.

12. Faites un court résumé de la vie de Pascal.

13. A quelle époque de sa vie commença-t-il à s'adonner à l'étude de l'Ecriture et de la morale chrétienne?

14. Les pensées sont-elles un ouvrage fini?

15. Citez quelques-unes des pensées.

16. Développez cette pensée: *Le cœur a ses raisons que la raison ne connaît pas.*

17. Quel est le jugement de Pascal sur Montaigne.

18. Quel était la vocation de La Bruyère?

19. Comment-a-il composé ses *Caractères*?

20. Est-ce un ouvrage à *clef*?

B.A. ORDINARY.

FOURTH YEAR.

WEDNESDAY, APRIL 18TH:—MORNING, 9 TO 12.

Examiner,.....P. J. DAREY, LL.D.

Toutes les réponses devront être écrites en français.

1. Traduisez en anglais:

Lauriers, sacrés rameaux qu'on veut réduire en poudre, (1)
Vous qui mettez sa tête (2) à couvert de la foudre,
L'abandonnerez-vous à l'infâme couteau
Qui fait choir les méchants sous la main du bourreau!
Romains, souffrirez-vous qu'on vous immole un homme
Sans qui Rome aujourd'hui cesserait d'être Rome, (3)
Et qu'un Romain s'efforce à tacher (8) le renom
D'un guerrier à qui tous doivent un si beau nom?
Dis, Valère, (4) dis-nous, si tu veux qu'il périsse, (5)
Où penses-tu choisir un lieu pour son supplice?
Sera-ce entre ces murs que mille et mille voix
Font résonner encore du bruit de ses exploits?

Sera-ce hors des murs, au milieu de ces places
Qu'on voit fumer encore du sang des Curiaces,
Entre leurs trois tombeaux, et dans ce champ d'honneur
Témoin de sa vaillance et de notre bonheur?
Tu ne saurais (6) cacher sa peine (7) à sa victoire;
Dans les murs, hors des murs (8) tout parle de sa gloire,
Tout s'oppose à l'effort de ton injuste amour,
Qui veut d'un si bon sang souiller un si beau jour.

CORNEILLE, *Horace, Act. V., Sc. III.*

2. Qui est-ce qui parle dans le morceau ci-dessus? Devant qui?

3. (1) Comment? (2) La tête de qui? (3) Comment cesserait-elle d'être Rome? (4) Qui était Valère? (5) Qui est-ce qu'il voulait qu'il périsse? (6) Pour quel verbe *saurais* est-il employé? (7) Quel est le sens ordinaire de *peine?* Dans quel sens est-il employé ici? (8) Quelle différence y a-t-il entre *tacher* et *tâcher;* entre *murs* et *mûrs*.

4. Quelle est la grande idée morale de la tragédie d'Horace? Citez quatre autres tragédies de Corneille.

5. Traduisez en français:

The excitement (in reference to the execution of Nuncomar) among all classes was great. Francis, and Francis' few adherents, described the governor-general and the chief-justice as the worst of murderers. Clavering, it was said, swore that even at the foot of the gallows, Nuncomar should be rescued. The bulk of the European society, though strongly attached to the governor-general, could not but feel compassion for a man who, with all his crimes, had so long filled so large a space in their sight, who had been great and powerful before the British Empire in India began to exist. The feeling of the Hindoos was infinitely stronger. They were, indeed, not a a people to strike one blow for their country man. But his sentence filled them with sorrow and dismay.

MACAULAY, *Warren Hastings.*

6. En quel genre de littérature les auteurs suivants se sont-ils distingués?—Barante, Marie-Joseph Chénier, Cuvier, Ducis, Nisard, Michaud, de Bonald, Guizot. Citez leurs principaux ouvrages. Sous quel régime vivaient-ils respectivement?

7. Qui sont les auteurs d'Hernani, du Lac, du Génie du Christianisme, de la Sainte Alliance des Peuples, de Corine, du Voyage autour de ma chambre, de l Histoire du Consulat et de l'Empire, de l'Ecole des Vieillards, de Monte-Christo, et des Rapports du physique et du moral de l'homme?

8. Traduisez en français:

He would not stand it any longer, he was quite out of patience. You will not succeed in convincing me. You must not be offended if I am not of your opinion. Nevertheless, I managed to extract some money from him. Don't say that; they will laugh in your face. Your long discourses bore

me to death. That is a bad affair, you ought to be pleased that you got out of it so cheaply. May it please Heaven that no worse misfortune befall him. In the twinkling of an eye I will be dressed. Ask your brother Tom to come, he is a jolly fellow, he never fosters melancholy. You always enlarge so much upon your topics that one feels inclined to yawn.

COGERY, *Third Course in French.*

FOURTH YEAR ADDITIONAL COURSE.

MONDAY, APRIL 23RD:—MORNING, 9 TO 12.

Examiner,.....P. J. DAREY, L.L.D.

1. Qu'est-ce que vous appelez chansons de *gestes?* Quelle est la plus ancienne?

2. Dites tout ce que vous savez sur cet ancien monument littéraire.

3. Donnez la date du règne de Charlemagne. Par quoi ce monarque est-il connu dans les lettres? Quelles étaient les trois langues parlées en Gaule sous son règne?

4. Qu'est-ce que c'étaient que les *jongleurs?*

5. Donnez une analyse du *Renaud de Montaûban.*

6. Qu'est-ce que comprenait le *cycle breton?*

7. Faites connaître le récit de la *Croisade des Albigeois.*

8. Faites connaître le *Roman de la Rose.*

9. Quelle influence la réformation eut-elle sur la littérature française?

10. Faites un résumé de la vie et des écrits de Calvin. Que dites-vous de son style? Faites une analyse de *l'Institution Chrétienne.*

11. Qu'est-ce que le *Philosophe sous les toits?* En combien de parties est-il divisé?

12. Traduisez en anglais:—Cousiner avec le diable. A force de brûler, de démolir et de tuer, vous vous racornissez un peu à l'endroit des sentiments, et quand la baïonette vous a fait roi, il vous vient parfois des idées d'autocrate un peu fortes en couleur. Des gens qui feraient de la mort de leur mère un calembour. Quand la fatigue prenait le dessus. Une fois en mesure de remboîter le pas, je pris congé du major.

13. Qu'est-ce qu'on appelle *langue romane rustique?* Pourquoi est-elle ainsi appelée?

14. Quels sont les caractères spécifiques pour reconnaître les mots d'origine populaire et les distinguer des mots d'origine savante?

15. Qu'est-ce que vous entendez par voyelle *tonique?* Qu'appelez-vous accent tonique?

16. Quand le nombre des cas latins fut-il réduit à deux? Quels furent ces deux cas?

17. Traduisez en français :—

Celia. I pray thee, Rosalind, sweet my coz, be merry.

Rosalind. Dear Celia, I show more mirth than I am mistress of: and would you yet I were merrier? Unless you would teach me to forget a banished father, you must not learn me how to remember any extraordinary pleasure.

Celia. Herein, I see, thou lovest me not with the full weight that I love thee: if my uncle, thy banished father, had banished thy uncle, the duke, my father, so thou hadst been still with me, I could have taught my love to take thy father for mine; so would'st thou, if the truth of thy love to me were so righteously tempered as mine is in thee.

Rosalind. Well I will forget the condition of my estate, to rejoice in yours.

As you like it.

GERMAN.

FIRST YEAR.

THURSDAY, APRIL 19TH:—MORNING, 9 TO 12.

Examiner,..... C. F. A. MARKGRAF, M.A.

1. Translate into English :—

(A) „Wohl hab' ich es gesehen,
Das hohe Schloß am Meer,
Und den Mond darüber stehen
Und Nebel weit umher."
Der Wind und des Meeres Wallen,
Gaben sie frischen Klang?
Vernahmst du aus hohen Hallen
Saiten und Festgesang?

„Die Winde, die Wogen alle
Lagen in tiefer Ruh',
Einem Klagelied aus der Halle
Hört' ich mit Thränen zu."

Sahest du oben gehen
Den König und sein Gemahl,
Der roten Mäntel Wehen,
Der goldnen Kronen Strahl?

Führten sie nicht mit Wonne
Eine schöne Jungfrau dar,
Herrlich wie die Sonne,
Strahlend im goldenen Haar?

Uhland, Das Schloß am Meere.

(6) Der andere, ein Kaufmann, sagte: „Nie habe ich mich mit meines Nächsten Schaden bereichert; nie ist sein Fluch mit mir zu Bette gegangen, und von meinem Vermögen gab ich gern den Armen, darum hat mir Gott die Jahre geschenkt."

Der dritte, ein Richter des Volkes, sprach: „Nie nahm ich Geschenke; nie bestand ich starr auf meinem Sinne: im Schwersten suchte ich mich jederzeit zuerst zu überwinden, darum hat mich Gott mit meinem Alter gesegnet." Da traten ihre Söhne und Enkel zu ihnen heran, küßten ihre Hände und kränzten sie mit Blumen. Und die Väter segneten sie und sprachen: „Wie eure Jugend, sei auch euer Alter! Eure Kinder seien euch, was ihr uns seid: auf unserm greisen Haar eine blühende Rosenkrone."

Das Alter ist eine schöne Krone; man findet sie aber nur auf dem Wege der Mäßigkeit, der Gerechtigkeit und Weisheit.

Herder, Die Krone des Alters.

2. (See Ext. A. B. C.) (*a*) Explain the forms „Die Alten," „den, Jungen," and show their declension. (*b*) Give the other cases Sing., and the Nom. Plu. of:—die schweigende Flut; sinkender Nacht; das gewaltige Haus; des zerrißten Menschen, dein traumloser Bruder. (*c*) Parse the following verbs, and give their Present Infinitives:—ist gedrungen, kam, sprach, mag, flogen, sah, stäubte auf, verlor, verglich, gießest.

3. Show the difference in meaning between beide and beides; Landfrau (countrywoman) and Landsmännin (countrywoman); erhalten (to receive) and empfangen (to receive); Land (country) and Gegend (country); behalten (to remember) and sich erinnern (to remember;) werden (shall) and sollen (shall); draußen (outside) and außerhalb (outside); oben (above), hinauf (above) and herauf (above).

4. Translate:—Es gelänge ihm, wenn er sich mehr Mühe gäbe. Spätestens komme ich heute Abend. Man hat ihm sagen lassen, er könne es thun, wenn er sich gut betrage. Es lag mir sehr viel daran, mit ihm darüber zu sprechen. Nehmt euch in Acht! Am liebsten ist es mir, wenn es sogleich geschieht. Unsere Soldaten schlugen die Feinde in die Flucht.

5. (*a*) When may *some* or *any* be rendered by welcher, e, es, pl. welche? Give short examples. (*b*) Can any compound verbs be used both *separably* and *inseparably*? Explain, and give examples.

6. (*a*) Give the 3rd Sing. and 2nd Plu. of the Present, Imperfect, Pluperfect, and First Future, Indicative and Subjunctive *active*, of:—treffen, erkennen, aufschreiben. (*b*) Write down the Imperative in full of:—helfen, laufen, sich vorstellen.

7. Conjugate „entschuldigen", giving the 2nd Sing. and 1st Plural of all the moods and tenses *passive*.

8. Translate into German :—

These books do not belong to me, they are yours. None of the *persons* present had perceived the strangers. Do not threaten us, for we do not fear you. Remain on this side of the river! When will (Fut.) he answer the note which I sent (Perf.) him? Your servant thought you had gone out, but we knew he was mistaken. All travellers wish to see Switzerland, Italy and the Rhine. Francis' and Emily's cousins (fem.) shall (Fut.) travel next summer with Adelaide's sisters to the Highlands of Scotland. The Harzynian Forest is one of the highest ranges of mountains in Germany. The messenger would have been rewarded, if he had arrived at (zu, Dat.) the right time.

INTERMEDIATE EXAMINATION.

THURSDAY, APRIL 19TH :—MORNING, 9 TO 12.

Examiner,.....C. F. A. MARKGRAF, M.A.

1. Translate into English :—

(A)

Und frühe beim Morgenrot
Der Fischer kommt mit den Flechten ;
Am Tage drohet der Tod,
Die Rache schafft in den Nächten.

Von Jahr zu Jahr sie nicht ruht,
Die Alten zeigen's den Jungen,
Bis daß die schweigende Flut
Ist unter das Haus gedrungen ;

Bis daß in sinkender Nacht,
Wo der Fischer träumt auf dem Pfühle,
Das Haus, das gewaltige, kracht,
Versinkt in der Wogen Gewühle.

G. Schwab, Des Fischers Haus.

(B)

Sie sprach's. Der ernste, richtende Augenblick
Kam mit dem Herold näher. „Ich liebe dich!"
Sprach schnell mit Flammenblick Teutona,
„Brittin, ich liebe dich mit Bewunderung!

Doch dich nicht heißer, als die Unsterblichkeit
Und jene Palmen! Rühre, dein Genius
Gebeut er's, sie vor mir ; doch faß' ich,
Wenn du sie fassest, dann gleich die Kron' auch.

Und, o wie beb' ich! o ihr Unsterblichen
Vielleicht erreich' ich früher das hohe Ziel!
Dann mag, o dann an meine leichte
Fliegende Locke dein Athem hauchen!"
Der Herold klang! sie flogen mit Adlereil'.
Die weite Laufbahn stäubte, wie Wolken, auf.
Ich sah: Vorbei der Eiche wehte
Dunkler der Staub, und mein Blick verlor sie.

Klopstock, Die beiden Musen.

(C) Heiliger Schlaf! Eben darum verglich man Dich mit dem Tode. In einer Minute gießest du mehr Lethe über die Gedächtnißtafel des zerrißten Menschen, als das Wachen eines längsten Tages.—Und dann kühlst du die auftobende, entbrannte Brust, und der Mensch stehet auf, wieder der Morgensonne würdig. Sei mir gesegnet, bis dein traumloser Bruder kommt, der noch viel schöner und länger besänftigt.

I. P. Richter, Der Schlaf.

THIRD YEAR.

THURSDAY, APRIL 19TH :— MORNING, 9 TO 12.

Examiner.....C. F. A. MARKGRAF, M.A.

I. Übersetzen Sie ins Deutsche:—

* Aus Chamisso's „Peter Schlemihl":—3. Kap. Seiten 21–22.

Aus Lessing's „Minna von Barnhelm:—

2. Aufzug. 9. Auftritt. Seite 38.

II. Grammatik.—

* 1. (*a*) Geben Sie die Verben an, denen ein Adjektiv oder ein Substantiv im Nominativ als Prädikat nachfolgen muß; und fügen Sie kurze Beispiele hinzu. (*b*) Nennen Sie acht Verben, die den Genitiv oder Akkusativ (oder den Akk. mit einer Präposition) regieren.

2. Erklären Sie die Ableitung von Substantiven und Adjektiven.

* 3. Weisen Sie Beispiele von unpersönlichen Verben vor, *a*. welche den Genitiv, und *β*. welche den Dativ regieren.

4. In welchen besondern Fällen wird im Deutschen das Präsens des Indikativs gebraucht, und nicht im Englischen? Geben Sie Beispiele.

* 5. Geben Sie die entsprechenden deutschen Idiome der folgenden Sätze.—I have been told; a ship has been wrecked; you have been riding *for a long time*: we found them sitting; he ought to have known that; I am wished to forget it; what is there to be seen? The children came jumping.

6. Übersetzen Sie mit sorgfältiger Beachtung der englischen Sprachweise:—du wirst dich wohl geirrt haben. Käme er doch wieder! Ich hätte wohl Zeit hinzugehen. Weiter! Hältst du dein Versprechen, so werde ich auch meines halten. Vergieb mir, daß ich dich habe warten lassen.

7. Wann wird die englische Präposition 'of' durch den Genitiv im Deutschen ausgedrückt? Erläutern Sie die verschiedenen Fälle durch kurze Beispiele.

III. Übersetzen Sie ins Deutsche:—

The first letter-post was introduced in Germany during the reign (Regierung, f.) of (the) emperor Maximilian I. by a nobleman called (Namens) Franz von Thurn und Taxis. Constantine the Great was the first prince who adopted the Christian religion. These people are worthy of assistance, for they are innocent of (an, Dat.) their misfortune. That boy is unlike his father. Dresden is the capital of the kingdom of Saxony. Many a one wishes to catch Fortune by hunting *her*; but he only chases her away. Having lost so much time yesterday, you must be very diligent to-day. All persons assembled on the shore, waited with impatience for the appearance (Erscheinen, n.) of the vessel.

IV. Litteratur.

* 1. Schildern Sie den eigentümlichen Charakter des schwäbischen Zeitalters und nennen Sie die vorzüglichsten Minnesänger.

2. Schreiben Sie kurze Notizen über Gottsched und Bodmer, und berichten Sie, was Ihnen über den litterarischen Kampf der Leipziger und Schweizerischen Schulen bekannt ist. Welchen Einfluß hat derselbe auf die deutsche Litteratur geäußert?

3. Zu welcher Schule gehörten die Schriftsteller, welche man als die "Vorläufer der Klassischen Periode" bezeichnet? Nennen Sie die vornehmsten unter ihnen.

4. Erzählen Sie kurz die Hauptereignisse aus Lessing's Leben, und geben Sie die Titel seiner bedeutendsten Dramen. Was können Sie über den Plan, die Darstellung und den Zweck seines Lustspiels „Minna von Barnhelm" sagen?

Note — The questions marked with an asterisk are to be answered by the *male* students only.

THIRD YEAR HONOURS.

MONDAY, APRIL 23RD :— MORNING, 9 TO HALF PAST 12.

Examiner.....C. F. A. MARKGRAF, M.A.

1. Vergleichen Sie Klopstock und Lessing in Hinsicht auf ihren litterarischen Charakter.

2. (*a*) Schildern Sie in Kürze die neue geistige Bewegung zur Zeit des „Sturmes und Dranges", und nennen Sie die bedeutendsten unter den Originalgenies. (*b*) Welche Werke bekunden Herder's, Goethe's und Schiller's frühere Betheiligung an dieser Bewegung?

3. Machen Sie kurze, kritische Bemerkungen über Goethe's „Egmont", "Iphigenie", und „Wilhelm Meister's Lehr- und Wanderjahre".

4. In welche Zeit fällt die Wiederbelebung der mittelalterlichen Poesie? Berichten Sie, was Ihnen über die Bestrebungen der früheren und späteren Romantiker bekannt ist. Nennen Sie die vornehmsten unter ihnen.

5. Schreiben Sie, mit Bezeichnung der besondern litterarischen Richtung jedes nachgenannten Schriftstellers, kurze Notizen über Rückert, Uhland und Heine.

6. Nennen Sie die Autoren der folgenden Werke:—Der Geisterseher; Die Jäger; Der Weltmann und der Dichter; Das Leben des Quintus Fixlein; Phantasus; Undine; Der brave Kasperl und das schöne Annerl; Aus dem Leben eines Taugenichts; Die Ahnfrau; Reisebilder.

II. Die Deutsche Sprache (Schleicher).

1. Zählen Sie die Sprachfamilien auf, welche die asiatische Abtheilung der indogermanischen Sprachsippe bilden.

2. Erklären Sie den Unterschied zwischen Sanskrit und Prakrit, Zend und Parsi.

3. Auf welchem Wege können wir zu der Erkenntnis gelangen, daß die Ur-Indogermanen schon vor dem Antritt ihrer Wanderung eine verhältnismäßig hohe Kulturstufe erreicht haben.

4. (*a*) Welches ist die für die Sprachforschung wichtigste Sprache *α.* in der celtischen, *β.* in der slawischen, und *γ.* in der deutschen Sprachfamilie? (*b*) Aus welchen Zeiträumen datieren sich die ältesten Schriftdenkmale einer jeden der obengenannten Familien?

5. Welche Sprachen bilden die nordeuropäische Abtheilung der indogermanischen Sprachsippe?

6. (*a*) In welche Periode ist die Entstehung der deutschen Grundsprache zu versetzen? (*b*) Nennen Sie die drei ursprünglich ver-

ſchiedenen Sprachformen, in welche ſich die deutſche Grundſprache, nach Schleicher's Vermutung, zerlegt hat.

7. Verſinnlichen Sie die Verzweigung des deutſchen Sprachaſtes.

8. Erklären Sie mit Beifügung von Beiſpielen den Unterſchied *a.* zwiſchen Hochdeutſch und Niederdeutſch, *b.* zwiſchen Althochdeutſch und Mittelhochdeutſch, und *c.* zwiſchen Mittelhochdeutſch und Neuhochdeutſch.

B. A. ORDINARY EXAMINATION.

THURSDAY, APRIL 19TH: —MORNING, 9 TO 12.

Examiner, ... C. F. A. MARKGRAF, M.A.

I. Überſetzen Sie ins Deutſche:—

(A) The following anecdote *is related* of one of the old knights of Drachenfels: When one day the knights of the country were assembled, and every *one* boasted of the costliness of the precious stones in his rings, he of Drachenfels also exhibited his ring in which he had caused a small piece of the stones of his mountain to be carefully set, and praised *it* (this) as something especially precious. When all derided him about it, the proprietor said: "Although this stone has no glittering appearance, (yet) I prize it higher than all your stones *put* together, for yours do not bring you any profit, but this (pointing to his stone) procures me every year many hundred florins from the canons of Cologne for the building of their cathedral."

(B) This family, whose arrival *at* (in) the little inn we have just witnessed, came from Berlin and were going to Saxony, where the father, Paul Gerhardt, was born in the little town of G——. This pious man became afterwards famous as a religious poet, and (has) remained so until the present time. Paul Gerhardt had been so fortunate to obtain the office of (a) deacon at the church of St. Nicholas in Berlin; he had administered this office with the strictest conscientiousness and fidelity, and both by this and by his Christian life he had gained the love and respect of his parishioners in a high degree. A short time ago, however, he had been complicated in the religious quarrels which at that time took place in the electorate of Brandenburg, and had had the misfortune to be dismissed from his office and exiled from the country by command of the elector.

II. Grammatik.

1. Überſetzen Sie mit ſorgfältiger Beachtung der deutſchen Konſtruktion:—the deeds of King Frederick the Second; Alexander the Great's history; the enemies, the mighty, prevail; the steppe lies

stretched out dead and stiff; ye happy ones; clouds like wings; free from all obligation; weary of singing; a happiness unhoped for by me; I should be content with it.

2. (*a*) Erwähnen Sie einige Adjektiven, *α.* welche nur in attributiver und *β.* andere, welche nur in prädikativer Form gebraucht werden. (*b*) Nennen Sie sechs Adjektiven, die eine mangelhafte Komparation haben.

3. Übersetzen und erklären Sie die folgenden Redeformen:—von schönem roten Tuche; sie ist mir am liebsten; er ist am meisten knechtisch; er war mehr tapfer als klug; aller von dem deutschen Reiche abhängigen, oder dazu gehörigen Völkerstämme; angenehm von Gestalt; leicht zu schaffen.

4. Erläutern Sie durch Beispiele die besonderen Fälle, wo das deutsche Personalpronom „es" gebraucht wird.

III. Übersetzen Sie aus Schiller's „Wallensteins Tod":—
Erster Aufzug. Vierter Auftritt. Seite 14.
Zweiter Aufzug. Siebenter Auftritt. Seiten 59–60.

IV. Litteratur.

1. Welche Dichtart bildet das Hauptelement von Bürger's Muse? Erwähnen Sie seiner besten Gedichte.

2. Wann, und zu welchem Zwecke wurde der „Göttinger Dichterbund" gestiftet? Nennen Sie die Mitglieder desselben.

3. Bezeichnen Sie den speciellen litterarischen Charakter der folgenden Werke, und nennen Sie die Verfaßer derselben:—Messias; Der Frühling; An den König; Der Cid; Cyrus; Luise; Belsazer; Siegwart; Ugolino.

4. Geben Sie eine kurze Lebensskizze von Schiller. Nennen Sie seine vorzüglichsten Dramen. Wann wurde „Wallenstein" begonnen und vollendet? Geben Sie auch die Titel derjenigen Werke, die Schiller's Ruf als Historiker und philosophischen Schriftsteller begründet haben.

HEBREW.

ELEMENTARY COURSE.

THURSDAY, MARCH 29TH, P.M.

Examiner,.....PROF. D. COUSSIRAT, B.A., B.D., Officier d'Académie.

1. Translate literally:

(1) וַיְבָרֶךְ אֹתָם א וַיֹּאמֶר לָהֶם א פְּרוּ וּרְבוּ וּמִלְאוּ
אֶת־הָאָרֶץ וְכִבְשֻׁהָ וּרְדוּ בִּרְגַת הַיָּם וּבְעוֹף הַשָּׁמַיִם

(2) וַיִּיצֶר יְהוָה אֱ֝לֹהִים אֶת־הָאָדָם עָפָר מִן־הָאֲדָמָה וַיִּפַּח בְּאַפָּיו נִשְׁמַת חַיִּים׃

(3) וַיַּבְדֵּל בֵּין מְאֹרוֹת לְמִאֹרֹת׃

(4) בְּיוֹם אֲכָלְךָ מִן־הָעֵץ תָּמוּת׃

2. Point and translate :—

ומעץ הדעת טוב ורע לא תאכל ממנו כי ביום אכלך מות תמות׃—הקטל׃—יקטיל׃—קטול׃

3. Translate into Hebrew : (1) I knew that thou art good.—(2) God will sanctify the seventh day.—(3) I am God who created the light.—(4) He will rest.—I shall call.—They shall plant.—Thou (m.) wilt give.—(5) Thou mayest eat from all the fruit which God has given.

4. Parse fully the following words—explain the nature of the vowels, mark the tone, state the uses of the dageshes in each case—:

(1) נָתַתִּי (2) בִּרְנַת (3) יְבָרֵךְ (4) וַיְבָרֶךְ (5) כְּנָפַיִם

5. Write a paradigm of (1) מָשַׁל (Niphal Imperfect).

(2) בָּדַל (Hiphil Perfect).

6. In what cases is the Dagesh forte omitted ?

7. Show the use of the accents Zaqeph Qaton, Zaqeph Gadol and Rebia.

8. Point out the characteristics of Segholates.

9. What is the form of the Inf. construct Kal before Suffixes ?

10. Oral examination:—Read the pointed and unpointed text of Genesis I and II.

INTERMEDIATE COURSE.

THURSDAY, MARCH 29, P.M.

Examiners, PROF. D. COUSSIRAT, B.A., B.D., Officier d'Académie. PROF. G. WEIR, LL.D.

1. Translate literally —(a) Genesis 3, 14-15 (inclusive.)
(b) " 6, 17-19 "
(c) Exodus 20, 25-26 "

2. Parse fully—explaining the vowel-changes, giving the roo and marking the tone—the following :

(1) הִרְאָה (2) יַעֲזֹב־ (3) יִצְמַח (4) יִטַּע (5) יַצְמַח

(6) מַזְרִיעַ (7) יָדַעְתָּ (8) הִשִּׁיא (9) יְשׁוּפְךָ (10) עִצְּבוֹנֵךְ

3. Give a tabular view of (1) לקח (in Kal).

(2) נתן (in Kal).

4. Translate into Hebrew :—(1) Thirty years—(2) Three books.—(3) This is a good book.—(4) And the man lived three hundred and forty-eight years. (5) The sons of Noah were not righteous.

5. Translate the following sentence, giving the principle of Syntax involved in it :

וַאֲנִי הִנְנִי מֵבִיא

6. Point and translate the two first sentences of the Masoretic note found at the end of the book of Genesis.

7. Oral examination : Reading.

ADVANCED COURSE.

THURSDAY, MARCH 29, P.M.

Examiners, { PROF. D. COUSSIRAT, B.A., B.D., Officier d'Académie. PROF. G. WEIR, L.L.D.

1. Translate literally—(a) Isaiah 7, 10–13 (inclusive).
(b) " 55, 6–8 "
(c) Psalm 42, 7-9 "
(d) " 55, 12-14 "

2. Parse fully (explaining the vowel-changes) :

(1) חִלִּי (2) מְכָה (3) נֶאְלָמָה (4) הֶחֱלִי (5) זְרוּ

(6) חָרְפֵנִי (7) צָהֳרַיִם (8) וַיַּעֲנֵם (9) קָרַב־

(10) יְכַלְכֵּלְךָ

3. Point and translate the Masoretic note at the end of the book of Isaiah.

4. Give a paradigm of (1) מָוֶת

(2) שִׂים (future Kal.)

5. Write an explanatory note on Isaiah VII, 14.

6. Give the root and meaning of the following names : Jerushalaim—Jotham—Achaz—Hezechiah—Uzziah—Israel—Sion.

7. Render into Hebrew: (1) Return, O my soul, to him.—(2) Hear O Israel, my people.—(3) And he went on his way.—(4) Sit down here at my feet.—(5) Take thy son in peace.

8. Oral examination : Reading.

CHALDEE.

TUESDAY, APRIL 3RD, A.M.

Examiner, THE REV. PROF. COUSSIRAT, B.A., B.D., OFFICIER D'ACADEMIE

1. Translate literally :— (a) Daniel 7, 24-26 inclusive.
(b) Onkelos, Genesis 9, 15-17.
(c) Jonathan ben Uzziel, Isaiah 6, 11-13.

2. Compare in Daniel 2, 27 the original Chaldee with the Syriac, Hebrew and Greek translations, and point the Hebrew text.

3. Parse fully verbs and nouns in Psalm 24, verse 4—Targum of Jonathan ben Uzziel.

4. Draw up a synopsis in Hebrew, Chaldee and Syriac of :
( ) קום (Aphel preter. and fut.)
(2) מלך (Sing and plur., with light and grave suffixes).

5. Describe briefly the Targums of (a) Onkelos, (b) Jonathan ben Uzziel, (c) Pseudo-Jonathan, (d) Jerusalem.

6. Comment on the word "Aramaic," as opposed to "Chaldee."

7. Compare the Chaldee with the Syriac as to (a) grammatical forms, (b) syntactical construction, (c) and stock of words.

8. Point out the main differences between the Targum of Onkelos and the Biblical Chaldee.

THE NEIL STEWART PRIZE.

TRANSLATION AND ANALYSIS.

MONDAY, APRIL 9th, A.M.

Examiner.THE REV.PROF. COUSSIRAT,B.A B.D.,OFFICIER D'ACADEMIE.

1. Translate literally Genesis VIII, 10-13 inclusive.
2. Analyse (1) ויחל (2) קלו (3) וייחל (4) ויסר.

3. Write explanatory notes on (1) Gomer, (2) Magog, (3) Madai, (4) Javan, (5) Ashkenaz, (6) Riphath, (7) Cush, (8) Mizraim, (9) Nimrod, (10) Heth.

4. Translate literally Habakkuk III, 15-17 inclusive.

5. Analyze (1) מספח (2) הביט (3) הערל (4) יכסך

6. Point and translate the Masoretic notes in Habak. III, 16, 17, 20.

7. Translate literally Psalm V, 5-8 inclusive.

8. Analyze (1) יגרך (2) הללים (3) יתעב (4) ביראתך

9. Comment on the superscriptions of Psalms IV and V.

10. Explain (1) the form of גוים (2) its different meanings.

THE NEIL STEWART PRIZE.

HEBREW GRAMMAR.

MONDAY, APRIL 9th, PM.

Examiner. THE REV. PROF. COUSSIRAT, B.A., B.D., OFFICIER D'ACADEMIE.

1. Give instances of Chaldaisms (1) in the form of the Infinitive; (2 in Piel; (3) in verbs ל״ה (4) in verbs ע״ו; (5) in the plural

2. Point out traces of case-endings.

3. Explain the following abbreviations: (1) יש׳; (2) פ׳; (3) וגו׳.

4. State the theory of helping vowels.

5. Give the syntax of shortened and lengthened Imperative.

6. Write a short paradigm of a ע״ו verb in Niphal and Hiphil.

7. Write a paradigm of עוֹלָם.

8. Give an instance of *Kaph veritatis*

9. Compare the Semitic to the Indo-European Languages (1) as to the grammatical structure; (2) as to the character of their lexicography.

10. How is the logical copula expressed in Hebrew ?

NATURAL SCIENCES.

CHEMISTRY.

FIRST YEAR.

MONDAY, APRIL 16TH :—MORNING, 9 TO 12.

Examiners,..... { B. J. HARRINGTON, B.A., Ph.D.
NEVIL N. EVANS, B.A.Sc., A. CAN. SOC.C.E.

1. How is Phosphoretted Hydrogen prepared? Give the equation and a sketch of the apparatus which you would employ.

2. A mineral specimen is supposed to be Apatite. How would you prove that it contains Phosphoric Acid?

3. How many litres of Carbon Dioxide can be obtained from 5 kilogrammes of Acid Sodium Carbonate?

4. State what you know with regard to the occurrence of Silica and Silicates in nature.

5. What takes place (*a*) when water is added to a solution of Bismuth Chloride, (*b*) when Starch is heated with dilute Sulphuric Acid, (*c*) when dilute Alcohol is distilled with Bleaching Powder?

6. Of what are ordinary Fats composed? What is the nature of the chemical change implied by the term Saponification?

7. What are the constituents of ordinary Baking-Powders? Explain their action giving equations.

8. Give the names and sources of the principal Sugars, and describe the manufacture of one of them.

9. State what you know with regard to Cellulose and its properties.

10. Distinguish between Hydrocarbons and Carbohydrates and between substitution and addition products. Give examples.

THIRD YEAR AND SECOND YEAR APPLIED SCIENCE.

ZOOLOGY.

MONDAY, APRIL 16TH :—2 TO 5 P.M.

Examiner,.....J. W. DAWSON, LL.D., F.R.S.

1. To what classes of animals do *Actinia* and *Hydra* belong? State their resemblances and differences.

2. Into what classes may the Echinodermata be divided? Describe two of them, and give examples.

3. Mention any groups of fossil *Hydrozoa* and *Anthozoa* not now found living, and describe one of them.

4. Define *Brachiopoda*, and mention some recent and fossil families.

5. Describe the structures of any animal of the class *Gastropoda*. State the distinctive characters of *Cephalopoda*.

6. Define the class *Crustacea*, and state its leading sub-divisions. Give examples of each, recent and fossil.

7. How are *Insecta* divided into orders? Give examples of each.

8. Describe fully any typical example of *Tunicata* or of *Lamellibranchiata*.

9. What are the distinctive characters of the classes *Amphibia* and *Reptilia*.

10. Name and note the characters of the orders of Carinate Birds or of Placental mammals.

11. What animals are included in the groups *Ganoidea*, *Arachnida*, *Errantia*, *Nautilidae*, *Discophora*, *Rhizopoda Porifera*. State the rank and position of the groups.

12. Describe, and refer to their Provinces and Classes, the specimens exhibited.

B.A. ORDINARY AND THIRD YEAR IN APPLIED SCIENCE.

MINERALOGY AND PETROGRAPHY.

FRIDAY, APRIL 13TH:—AFTERNOON, 2 TO 5.

Examiners,..... { SIR J. W. DAWSON, LL.D., F.R.S.
B. J. HARRINGTON, B.A., PH.D.

1. Describe Magnetite and Pyrite. How would you distinguish the latter from Marcasite and Pyrrhotite?

2. Name the principal kinds of Mineral Coal and give their distinctive characters.

3. How is difference of specific gravity taken advantage of in separating the minerals constituting rocks?

4. Give in two parallel columns a number of examples of Volcanic rocks and their supposed Plutonic representatives.

5. Explain the terms Acidic, Basic, Perlitic, Amygdaloidal. Why do amygdaloidal rocks often show evidence of much decomposition?

6. Name the principal Plutonic rocks and describe two of them.

7. What minerals have been observed in the Nepheline Syenites of Montreal?

8. Describe Liparite, Obsidian and Gneiss, stating what you know with regard to their origin.

9. State what you know with regard to the origin of Conglomerates, Breccias, Sandstones and Shales.

10. Describe the specimens exhibited, giving your opinion as to the origin of the rock in each case.

B.A. ORDINARY AND THIRD YEAR APPLIED SCIENCE.

GEOLOGY.

FRIDAY, APRIL 13TH:—MORNING, 9 TO 12.

Examiner,.....J. W. DAWSON, LL.D., F.R.S.

1. State the distribution of the Laurentian and Huronian rocks in North America, and mention their distinctive lithological characters.

2. Describe the Siluro-Cambrian or Ordovician formations of the vicinity of Montreal, and state how they are represented in England.

3. Explain the peculiarities of deposition of the Salina, Medina and Calciferous as distinguished from those of the Trenton, Chalk and Coal formation, with their geological relations and some of their characteristic fossils.

4. How would you distinguish by animal fossils the Niagara Limestone from the Corniferious, and this from the Lower Carboniferous?

5. State in a tabular form the Upper Silurian Formations represented in Ontario, with their European equivalents.

6. Describe the subdivisions of the Cretaceous and Tertiary or Cainozoic in Europe and in Western Canada.

7. State in tabular form the zoological or botanical and geological relations of *Zaphrentis*, *Nummulites*, *Sigillaria*, *Orthoceras*, *Baphetes*, *Terebratula*, *Calymene*, *Calamites*, *Productus*, *Ammonites*, *Psilophyton*, *Belemnites*, *Mastodon*, *Pliosaurus*.

8. Give some account of the Carboniferous formation of Eastern Canada and of the mode of occurrence of coal.

9. State the normal succession of deposits in the Pleistocene of Canada, and the probable mode of their deposition.

10. State and explain by a section the data for the determination of the relative ages of stratified rocks, and the manner of applying them.

11. State the geological formations to which the fossils exhibited belong, and name the fossils.

THIRD YEAR HONOURS IN NATURAL SCIENCE AND THIRD YEAR IN APPLIED SCIENCE (*Mining and Chemistry Courses*).

MINERALOGY.

MONDAY, APRIL 23RD:—MORNING, 9 TO 12.

Examiners,..... } SIR J. W. DAWSON, LL.D., F.R.S.
} B. J. HARRINGTON, B.A., PH.D.

1. Explain the nature of gyroidal forms in the Hexagonal System.

2. Discuss the causes producing difference of lustre in minerals.

3. Distinguish between play of colours, change of colours and iridescence.

4. State what you know with regard to the surface and internal imperfections of crystals.

5. Enumerate the inclined and parallel hemihedrons of the Isometric System, giving the symbols.

6. Give the leading characteristics of the Monoclinic System, explaining carefully the notation of the faces.

7. Explain the distinction between holohemihedral and hemiholohedral forms.

8. To what extent can colour be relied on as a distinctive character of minerals? What are the principal colours recognized by mineralogists?

9. Discuss Pseudomorphism, explaining fully the differents ways in which Pseudomorphs are formed.

10. Explain five of the following terms:—Tetartohedrism, Hemimorphism, Composition-Face, Sphenoid, Diametral Plane, Sectant.

11. Describe the specimens and models placed before you.

B. A. HONOURS IN NATURAL SCIENCE AND B.A. Sc.

(Mining and Chemistry Courses).

I. MINERALOGY.

WEDNESDAY, APRIL 4TH:—MORNING, 9 TO 12.

Examiners, ... { SIR J. W. DAWSON, LL.D., F.R.S.
B. J. HARRINGTON, B.A., PH.D.

1. Discuss the principles involved in the classification of mineral species.

2. To what mineral species do the following substances belong:—Flosferri, Piedmontite, Jeffersonite, Thulite, Elæolite, Rubellite?

3. What is the general formula of Garnet? Name and briefly characterize the leading varieties, explaining their classification.

4. What are the most important groups of Isomorphous minerals?

5. How would you distinguish Wavellite from Natrolite, Prehnite from Beryl, Witherite from Cerussite, Epidote from Hornblende, Bitotite from Phlogopite?

6. Name and briefly characterize the principal varieties of Corundum and Spinel.

7. Give a list of the mineral species which you know to occur in Canada.

8. Illustrate Hemihedry fully by examples from the Isometric and Hexagonal systems.

9. Give careful descriptions of each of the following minerals:—Turquois, Apophyllite, Titanite, Topaz, Leucite, Chrysolite.

10. Give the blowpipe characters of Amblygonite, Thomsonite, Nepheline, Rutile, Cuprite.

11. State what you know with regard to the Geological relations of Petroleum and Salt in Canada.

SPECIMENS:—Afternoon, 2 to 4.

Name and describe the specimens exhibited, stating what you know with regard to their geological relations.

B.A. HONOURS.

II. CANADIAN GEOLOGY AND PALÆONTOLOGY. (*In Part.*)

WEDNESDAY, APRIL 11TH:—9 A.M. TO 12, AND 2 TO 5.

Examiners,..... J. W. DAWSON, LL.D., F.R.S. / B. J. HARRINGTON, B.A., Ph.D.

1. Characterise the Laurentian rocks of Canada, with reference to their mineral character, the evidence as to fossils, and the subdivisions proposed for them.

2. State the stratigraphical relations of the Huronian or Kewenian in Canada and Newfoundland, and the characteristic rocks of the typical districts, with the views which may be held as to their geological equivalents elsewhere.

3. Describe the Palæozoic geology of the Province of Ontario on a line of section extending south-west from the Laurentian axis.

4. What formations in Canada would be indicated by the prevalence of the following genera: *Halysites, Pentamerus, Ptilodictya, Lituites, Maclurea, Trinucleus, Asaphus, Phyllograptus, Spirifer, Paradoxides.*

5. Describe the following formations, and state their geological position and special points of interest connected with them, and some of the characteristic fossils:—Black River, Utica, Oviskany, Medina.

6. Compare the rocks and fossils of the Cambrian of New Brunswick with those of corresponding formations in the New York series and in England.

7. Give in a tabular form the series of Ordovician rocks in Canada, with their European equivalents, distinguishing the Marginal and Plateau developments of each.

8. Describe shortly, or figure any species of each of the following genera —*Dictyonema, Orthis, Triarthrus, Pleurotomaria, Leperditia, Ophileta, Tetradium, Murchisonia, Stromatopora, Piloceras*; and state their geological relations in Canada.

9. Describe the rocks exposed in any important line of section across the Province of Quebec.

10. State what is known of the origin of the older crystalline rocks.

EXAMINATION IN SPECIMENS.

Refer the specimens exhibited to their Geological formations, and to their places in the Zoological or botanical classification.

B A. HONOURS.

THIRD PAPER.

III. CANADIAN GEOLOGY AND PALÆONTOLOGY (IN PART.)

WEDNESDAY, APRIL 20TH:—9 A.M. TO 12, AND 2 TO 5.

Examiners,..... { J. W. DAWSON, LL.D., F.R.S.
B. J. HARRINGTON, B.A., PH.D.

I Indicate the differances between the Erian rocks of Gaspe and New Brunswick and these of Ontario. State the succession in the latter.

2. Describe the Windsor series and the true coal measures in Nova Scotia, and give in detail the structure and accompaniment of a bed of coal.

3. State the structure and characteristic fossils of the Permo-carboniferous of Nova Scotia, and mention what is known of Permian in other parts of North America.

4. In what respects do the Cretaceous Deposits of Western Canada differ from the representative formations in Europe? Tabulate the Western Cretaceous, stating some of the fossils.

5. Enumerate in zoological series the principal fossils of the Canadian Pleistocene, and explain the phenomena of raised beaches and terraces.

6. In what formations would the following genera of fossils be expected to occur:—*Gryphea*, *Belemnitella*, *Nummulites*, *Palæotherium*, *Psilophyton*, *Mosasaurus*, *Ceratites*, *Pentremites*, *Zeuglodon*, *Dinoceras*, *Walchia*, *Lepidophloios*, *Machœracanthus*.

7. State what you know of mountain elevation and igneous ejection in Canada later than the Palæozoic.

8. State what you know of the occurrence of coal in the Cretaceous and Laramic series in Western Canada.

9. What is the geological range in Canada of the following genera:—*Mastodon*, *Baculites*, *Inoceramus*, *Platanus*, *Ostrea*.

10. Make a general section from the Pacific Coast of Vancouver Island to Winnipeg, showing orography and superficial deposits as well as geological structure.

Examination in Specimens.

11. Catalogue the Fossils contained in the specimens exhibited, and refer them to their respective Geological Formations.

B.A. HONOURS.

IV. PALÆONTOLOGY AND PRACTICAL GEOLOGY.

MONDAY, APRIL 23RD:—MORNING, 9 TO 12.

Examiners, ... { J. W. DAWSON, LL.D, F.R.S. / B. J. HARRINGTON, B.A., PH.D.

1. Describe the parts of a Trilobite, and state how modified in different genera.

2. Characterise the orders of Fishes, and state their relation to geological time.

3. State what you know of *Protospongia*, *Tetragraptus*, *Petraia*, *Maclurea*, *Glyptocrinus*, *Psilophyton*.

4. Notice the parts which would be most important in describing or determining a Tabulate Coral or a Cephalopod shell, and describe one of the specimens exhibited.

5. What are the characteristic differences of the Families of Brachiopods and their range in time?

6. Describe and classify fully one of the specimens exhibited.

7. Describe the varieties of Mineral Veins and the nature of their surface indications.

8. How would you proceed to ascertain the Geological structure of an unknown district? State methods, requisites, and how to indicate results.

9. How may the difficulties interposed by faults and flexures be overcome?

10. What are the principal modes of occurrence of igneous rocks, and how are they to be studied in the field?

11. What are the various modes of occurrence of gold in Canada?

12. Describe the specimen exhibited.

B.A. HONOURS AND B.A. Sc. (*Mining and Chemistry Courses.*)

PETROGRAPHY.

TUESDAY, APRIL 24TH:—MORNING, 9 TO 12.

Examiners, ... { SIR J. W. DAWSON, LL.D., F.R.S. / B. J. HARRINGTON, B.A., PH.D.

1. Give the optical characters of Tetragonal minerals as observed with the polarization microscope?

2. What is an extinction angle? How is it measured?

3. Explain pleochroism and absorption. Give instances in which these properties are important in distinguishing rock constituents.

4. Show by means of diagrams the relationship of the crystallographic, elasticity and optic axes in Pyroxene.

5. What are the optical characters of Orthoclase, Biotite, Garnet and Acmite as studied in thin sections with the microscope?

6. State what you know with regard to the microscopic characters of the Quartz Porphyries.

7. What are the principal rocks containing Nepheline as an essential constituent? Describe one of them. Explain the significance of the name Theralite.

8. Describe carefully the principal microscopic structures met with in glassy rocks.

9. Name the principal clastic rocks and discuss their origin. Into what groups may they be divided

10. State what you know with regard to Trachyte, Diabase and Lherzolite.

Determination of rocks, afternoon 2 to 4.

FACULTY OF APPLIED SCIENCE.

FACULTY OF APPLIED SCIENCE.

FACULTY OF APPLIED SCIENCE.

FIRST YEAR.

GEOMETRY.

WEDNESDAY, APRIL 11TH :—MORNING, 9 TO 12.

Examiner, ... G. H. CHANDLER, M. A

1. If a straight line be divided into any two parts, the squares on the whole line and on one of the parts are equal to twice the rectangle contained by the whole and that part, together with the square on the other part.

(*a*) Hence, by the aid of Euclid II. 4, deduce II. 8.

2. The opposite angles of a quadrilateral inscribed in a circle are together equal to two right angles.

(*a*) Divide a circle into two parts so that the angle contained in one segment may be twice the angle contained in t e other.

3. Every equilateral polygon inscribed in a circle is also equiangular.

4. If the vertical angle of a triangle be bisected by a straight line which cuts the base, the segments of the base shall have the same ratio as the sides of the triangle.

5. Triangles which have one angle of the one equal to one angle of the other, and their sides about the equal angles reciprocally proportional, are equal in area.

6. If the vertical angle of a triangle be bisected by a straight line which cuts the base, the rectangle contained by the sides of the triangle is equal to the rectangle contained by the segments of the base, together with the square on the line which bisects the angle.

7. Prove the following properties of a parabola:

(*a*) If a secant PQ meets the directrix in Z, the focal distance of Z bisects the exterior angle between the focal distances of P and Q.

(*b*) The subnormal is half the latus rectum.

(*c*) Tangents from any point subtend equal angles at the focus.

(*d*) The parameter of the diameter through any point on the curve is equal to four times the focal distance of the point.

FIRST YEAR.

TRIGONOMETRY (*First Paper*)—ALGEBRA.

TUESDAY, APRIL 17TH :—MORNING, 9 TO 12.

Examiner,.....G. H. CHANDLER, M.A.

1. Explain the change in the signs and numerical values of the sine and cosine of an angle as the angle increases from 0° to 360°.

2. Prove that

(*a*) $\dfrac{\operatorname{cosec} A}{\sec A} + \dfrac{\sec A}{\operatorname{cosec} A} = \sec A \operatorname{cosec} A,$

(*b*) $\cos(180° - A) = -\cos A,$

(*c*) $\sin(-A) = -\sin A.$

3. Prove the following relations :—

(*a*) $\cos(A + B) = \cos A \cos B - \sin A \sin B,$

(*b*) $\cos A = 2\cos^2\dfrac{A}{2} - 1,$

(*c*) $\tan 50° + \cot 50° = 2 \sec 10°,$

(*d*) $\dfrac{1 + \sin A}{1 + \cos A} = \frac{1}{2}\left(1 + \tan \dfrac{A}{2}\right)^2,$

(*e*) $\dfrac{\sin(A + B)}{\sin A + \sin B} = \dfrac{\cos\frac{1}{2}(A + B)}{\cos\frac{1}{2}(A - B)}.$

4. Find by factoring the G.C.M. of

(*a*) $6x^2 + 7x - 3$ and $12x^2 + 16x - 3,$

(*b*) $15x^2 - x - 6$ and $9x^2 - 3x - 2,$

(*c*) $2x^3 + 6x^2 + 6x + 2$ and $6x^3 + 6x^2 - 6x - 6.$

5. Write down the square of $1 + 2x - 3x^2 + 4x^3$ and extract the square root of $4a^4 - 12a^3 + 25a^2 - 24a + 16.$

6. Show that $3\sqrt{75}$, $\frac{1}{2}\sqrt{147}$, $\frac{2}{3}\sqrt{\frac{4}{75}}$, $\sqrt[4]{\frac{9}{16}}$, $(144)^{-\frac{1}{4}}$ are similar surds.

7. Solve the equations

(*a*) $a + x - \sqrt{a^2 + x^2} = b.$

(*b*) $8x + \frac{7}{x} = \frac{65}{7}x,$

(*c*) $\dfrac{5x}{x + 4} - \dfrac{3x - 2}{2x - 3} = 2.$

8. Also the simultaneous equations

(*a*) $\left\{\begin{array}{l} x + 2y = 7, \\ y + 2z = 2, \\ 3x + 2y = z - 1. \end{array}\right\}$ (*b*) $\left\{\begin{array}{l} 3xy + 2x + y = 485, \\ 3x = 2y. \end{array}\right.$

FIRST YEAR.

TRIGONOMETRY (*Second Paper*).

FRIDAY, APRIL 20TH:—MORNING, 9 TO 12.

Examiner,..... ..... G. H. CHANDLER, M.A.

1. In any triangle

(*a*) $\sin \frac{A}{2} = \sqrt{\frac{(s-b)(s-c)}{bc}}$,

(*b*) $c = (a-b) \operatorname{cosec} \left(\frac{A-B}{2}\right) \cos \frac{C}{2}$.

2. The radius of the inscribed circle = area ÷ half the sum of the sides.

3. Solve the triangles in which

(*a*) $a = 8214$, $b = 3732$, $C = 61° 53'$

(*b*) $a = 2134$, $b = 1617$, $c = 815$.

4. A pole is fixed on the top of a mound, and the angles of elevation of the top and bottom of the pole are 60° and 30°. Prove that the length of the pole is twice the height of the mound.

5. A flag-staff 20 feet high stands on a wall 40 feet high. At a point A on a level with the bottom of the wall the flag-staff subtends an angle of 10°; how far is A from the wall?

6. A line AB, 400 yards in length, is measured close by the side of a river, and a point C close to the opposite bank is observed from A and B. Find the perpendicular breadth of the river, CAB being 50° and CBA 65°.

SECOND YEAR.

ANALYTIC GEOMETRY.

WEDNESDAY, APRIL 11TH:—MORNING, 9 TO 12.

Examiner. ....G. H. CHANDLER, M.A.

1. Find the equations of the sides of a triangle which has the points (2, 1), (3, —2), (—4, —1) for its vertices.

2. How far is the second point from the line joining the other two?

3. Find the angle of the triangle at this point.

4. Show that the equation $x + 7y + 11 = 0$ becomes $3x + y + \frac{11}{\sqrt{5}} = 0$ when the axis are turned through the angle $\tan^{-1} 2$.

5. Show that the equation of the circle described about the triangle of questions 1 is $x^2 + y^2 + x + 3y = 10$.

6. Find the area of this circle.

7. Given the base and the sum of the squares on the sides of a triangle, show that the locus of the vertex is a circle.

8. The minor axis of an ellipse is a mean proportional between the major axis and the latus rectum.

9. If a series of ellipses have the same major axis, the tangents at points which have the same abscissas all meet in one point on the major axis produced.

10. The distance of either focus of an hyperbola from an asymptote is equal to half the conjugate axis.

SECOND YEAR.

CALCULUS.

TUESDAY, APRIL 17TH:—MORNING, 9 TO 12.

Examiner,..... .....G. H. CHANDLER, M.A.

1. Prove the formulæ for differentiating rs, a^s, $\sin x$, and $\sin^{-1}x$.

2. Show that

(1) $d\,(a+x)\sqrt{a-x} = \dfrac{a-3x}{2\sqrt{a-x}}\,dx.$

(2) $d\,\log\sqrt{\dfrac{1+x}{1-x}} = \dfrac{dx}{1-x^2},$

(3) $d\left(\dfrac{x^2-x+1}{x^2+x-1}\right) = \dfrac{2x\,(x-2)\,dx}{(x^2+x-1)^2},$

(4) $d\,\tan^{-1}\left(\dfrac{2x-1}{\sqrt{3}}\right) = \dfrac{\sqrt{3}\,dx}{2(x^2-x+1)},$

3. Show by Maclaurin's Formula that

$$\tan^{-1}x = x - \frac{x^3}{3} + \frac{x^5}{5} - \&c.$$

4. Find how a right circular cone may be cut so as to get the parabola of greatest area.

5. Integrate $3x^{-4}\,dx$, $\dfrac{dx}{\cos^2\left(\frac{x}{2}\right)}$, $\dfrac{x\,dx}{1+x^4}$, $\dfrac{x^2\,dx}{a^3-x^3}$.

6. The equation of a certain curve is $y = x^2 - x^4$, find (*a*) the co-ordinates of its two points of inflexion, (*b*) the values of its two maximum ordinates, (*c*) that of its minimum ordinate.

7. Show that the whole area of this curve above the axis of x is $\frac{4}{15}$, and that the volume of the solid formed by the revolution of this part of the curve about the axis of x is $\frac{16}{315}\pi$.

8. The area bounded by the curve $y^2(1-x^2) = 1$, and its two asymptotes is 2π.

SECOND YEAR.

MECHANICS.

FRIDAY, APRIL 20TH :—MORNING, 9 TO 12.

Examiner,.....G. H. CHANDLER, M.A.

1. Find the relation between the power and the resistance in the screw when friction is taken into account.

2. A body having a spherical base is placed on the top of a sphere, determine the nature of the equilibrium.

3. One arm of a lever is at right angles to the other and is twice as long; a weight of 5 lbs. is suspended from the longer arm and 20 lbs. from the shorter; find the angle which the shorter arm makes with the horizon.

4. Distinguish fluids from solids, gases from liquids, specific gravity from density. Why is the surface of a liquid at rest a horizontal plane?

5. Find the centre of gravity of a solid hemisphere.

6. Find the centre of pressure of a triangle having one side in the surface of the liquid.

7. A cube is suspended in water by one of its angles which is at a depth equal to one edge of the cube; show that the pressures on the upper and lower faces are in the ratio $1 + \sqrt{3} : 2 + \sqrt{3}$.

8. A ship is observed to rise 3 inches in fresh water owing to a discharge of 1,000,000 lbs. of her cargo; what is the area of the ship's section at the water line?

9. When on account of a uniform acceleration f the velocity of a body is changed from V to v in the distance s, show that $v^2 = V^2 + 2fs$.

10. A body weighing 50 lbs. is acted on by a constant force which acts for 5 seconds and then ceases to act; the body then moves through 60 feet in the next two seconds. Express the force in pounds.

THIRD YEAR.

MATHEMATICS (ADVANCED).

WEDNESDAY, APRIL 11TH :—MORNING, 9 TO 12.

Examiner,.....G. H. CHANDLER, M.A.

1. Find the locus of the middle points of a series of parallel chords of an ellipse.

2. Conjugate diameters of an ellipse lie on opposite sides of the minor axis.

3. Tangents to conjugate hyperbolas at the extremities of conjugate diameters intersect on the asymptotes.

4. If $\sin {}^2u = \dfrac{x-y}{x+y}$, show that $x\dfrac{du}{dx} + y\dfrac{du}{dy} = 0$.

5. Show that $\dfrac{x - x^x}{1 - x + \log x} = 2$ when $x = 1$, and that

$$\frac{\tan(a+x) - \tan(a-x)}{\tan^{-1}(a+x) - \tan^{-1}(a-x)} = (1+a^2)\sec {}^2a. \text{ when } x = 0.$$

6. The radius of curvature at any point of the catenary $y = \dfrac{a}{2}\left(\dfrac{x}{a} - \dfrac{x}{a}\right)$ is numerically equal to the normal at that point.

7. In the curve $r^2 \cos 2\theta = a^2$, the perpendicular from the pole on the tangent $= \dfrac{a^2}{r}$.

8. Show that

(a) $\displaystyle\int \sqrt{a^2 + x^2}.\, dx = \frac{a^2}{2}\log\,(x + \sqrt{a^2+x^2}) + \frac{x}{2}\sqrt{a^2 + x^2},$

(b) $\displaystyle\int \frac{x^3\, dx}{1 + x^2)^{\frac{3}{2}}} = \frac{x^2+2}{\sqrt{1+x^2}},$

(c) $\displaystyle\int \frac{dx}{\sin^3 x} = -\frac{\cos x}{2\sin^2 x} + \tfrac{1}{2}\log\left(\tan\frac{x}{2}\right).$

9. A body moves towards a point under the influence of an attractive force which varies directly as the distance from the point; find the velocity at any point and the periodic time of the motion.

10. Find the formula for the angle between two lines in terms of the direction cosines of the lines.

11. Find the equation of the tangent plane at any point of the surface $z = x^2 - y^2$.

THIRD YEAR.

SPHERICAL TRIGONOMETRY AND PRACTICAL ASTRONOMY.

TUESDAY, APRIL 17TH:—MORNING, 9 TO 12.

Examiner,..... .....G. H. CHANDLER, M.A.

1. The sum of the three angles of a spherical triangle lies between two and six right angles.

2. Show (without assuming Napier's Rules) that in a right angled spherical triangle

$$\cos c = \cos a \cos b$$
$$\cos c = \cot A \cot B$$

3. In any spherical triangle

$$\frac{\sin A}{\sin a} = \frac{\sin B}{\sin b} = \frac{\sin C}{\sin c}$$

4. Assuming Napier's First Analogy, deduce the third Analogy.

5. Find the sidereal time when λ Draconis (Nautical Almanac, p. 342) will be at its greatest western elongation here to-day.

6. Find the formulae for the hour angle and azimuth of a star when setting.

7. With a sidereal chronometer Arcturus (Nautical Almanac, p. 348) is observed to have equal altitudes at 10 h. 55 m. 36.4s. and 17 h. 30 m. 29.6s. to-day. What is the error of the chronometer?

8. Explain the method of finding latitude by means of a single altitude out of the meridian.

9. The culmination of the moon is observed at 14 h. 57 m. 40s. mean time, March 30, 1888; find the longitude of the place of observation.

THIRD YEAR.

MECHANICS.

FRIDAY, APRIL 20TH:—MORNING, 9 TO 12.

Examiner,..... ....G. H. CHANDLER, M.A.

1. A stone is thrown up with a given velocity; how far will it rise (a) if thrown vertically upwards, (b) if thrown in a direction making an angle a with the horizon?

2. Find the centre of gravity of a solid hemisphere of uniform density.

3. When a conical vessel filled with water rests on a horizontal plane, the pressure on the base is equal to three times the weight of the water.

4. Describe the siphon gauge and the barometer gauge.

5. A vessel contains a quantity of air which weighs 8 grains and exerts a pressure of 16½ lbs. per square inch. If 3 grains more of air at the same temperature and pressure are introduced into the vessel, what pressure will now be exerted?

6. If p, v, t are respectively the pressure, volume and temperature (F) of a gas, show that $\frac{pv}{460 + t}$ is constant.

7. What is meant by the absolute zero of temperature, and how is it found?

8. Explain the arrangement of valves, etc., in a condensing syringe.

9. With what velocity will water issue from an orifice in a pipe connected with an accumulator giving a pressure of 700 lbs. per square inch?

10. The free surface of a liquid revolving about a vertical axis is a paraboloid.

SECOND AND THIRD YEARS.

ENGLISH COMPOSITION.

TUESDAY, 10TH APRIL:—AFTERNOON, 2 TO 4.

Examiners, ... { CHAS. E. MOYSE, B.A. / PAUL T. LAFLEUR, M.A.

1. Correct the errors in the following, and give reasons for your corrections:

a. Every one is not calculated to shew to advantage in such a position.

b. A capacious rent was made in the sail.

c. The climax of bad taste is reached in this book.

d. A look of determination underlaid the expression of his face.

e. The matter was arranged verbally, and not committed to writing.

f. He proposed a walk to Vauxhall, a place of which, he said, he had heard much, but had never seen it.

g. I must now make a general assertion, which, if you will note down and examine at your leisure, you will find useful.

h. He did not happen to have been present, and so lost his vote.

i. Sliding along the passage, many a word was said.

k. Being early killed, I sent a party to look for his body.

l. He preferred to know the worst than to imagine the best.

m. A moral and honorable mode of action and thought are enforced as a duty.

n. The plan proposed is one of the boldest that has ever been put forward.

2. Write an essay of not less than two pages on any one of the following subjects:—

A. Self-reliance.
B. A Great Feat of Engineering Skill.
C. None but the Brave deserve the Fair.

B.A.Sc. EXAMINATION.

DESIGNS FOR SESSION 1887-88.

(*A specification and estimate are required with each design.*)

Examiners, ... { HENRY T. BOVEY, M.A., M.INST.C.E. / JOHN KENNEDY, M.INST.C.E. / P. A. PETERSON, M.INST.C.E.

1. (*a*) A water crane with frost-proof housing and foundation; the mast and jib to be built up of C. I. pipes; the foundation to be of timber; rake of crane to be 20-ft.

(*b*) A steel plate Lancashire boiler fitted with Galloway tubes.

2. (*a*) A freight car four-wheeled truck with a carrying capacity of 40,000-lbs.; to be supplied with all necessary fittings for a hand brake gear.

(*b*) The link-motion and cylinder (18″ × 24″) for an express locomotive, with full details of the valve motion parts.

3. (*a*) A 50-ft. Sellar's Turntable with suitable foundations, and to be chiefly of cast iron; steel coned rollers and roller-box; to be designed for a total weight of 214,000 lbs. on bearings.

(*b*) A 14″ × 24″ stationary horizontal condensing engine with all necessary details for the construction of same.

4. (*a*) A 240-ft. through single-track bridge, 40-ft. deep at centre, with sloping top chord as per accompanying skeleton diagram, and for given live load.

(*b*) The drains, lavatories, and complete sanitary arrangements for the terminal station of a large railway.

5. (*a*) A 100-ft. trestle for a railway, with loading as per diagram.

(*b*) A 360′ × 70′ floating wharf to be reached by an 82′ × 19½′-wrought-iron bridge.

6. (*a*) The arrangement and machinery for washing, elevating and conveying coal, with details of the elevating machinery.

(*b*) A timber roof of 60-ft. span.

7. (*a*) Centres for the tunnels of a coal mine.

(*b*) Complete details of steam stamps.

8. (*a*) A combination roof of 50-ft. span.

(*b*) A Howe truss railway bridge of 200-ft. span.

9. (*a*) The main frame and body of a 33′ × 8′8″ × 7′ 1″ box car having a carrying capacity of 40,000-lbs.; the trucks being 33′ 3″ c. to c.; give details of draw bar and connections.

(*b*) A five-ton iron jib crane.

SECOND, THIRD AND FOURTH YEAR.

ESSAY.

TUESDAY, APRIL 10TH—9 A.M.

Examiners,..... HENRY T. BOVEY, M.A., M.INST.C.E.
B. J. HARRINGTON, B.A., PH.D.
C. H. MCLEOD, MAE., M. CAN. SOC., C.E.
D. P. PENHALLOW, B.SC.

Write an Essay on *one* of the following subjects:—

SECOND YEAR.

1. Chemical Formulæ and Equations.
2. Chemistry of Combustion.

3. Construction of a Railway Passenger Car.
4. Elimination of Errors in the Adjustments of Surveying Instruments.
5. Preservation of Timber.
6. Properties of Gases.

THIRD YEAR.

1. Acidimetry and Alkilimetry.
2. Construction of a Railway Passenger Car.
3. Elimination of Errors in the Adjustments of surveying Instruments.
4. Graphical determination of Stresses in Framed Structures.
5. Theory of Retaining Walls.
6. Value of Blowpipe Analysis.

FOURTH YEAR.

1. Economic minerals of Canada.
2. Graphical determination of Stresses in Framed Structures.
3. Impact of Fluids.
4. Physical Properties of Metals.
5. Pistons and Piston Rods.
6. Two Laws of Thermodynamics.

THIRD YEAR AND B.A. SC. EXAMINATIONS.

THEORY OF STRUCTURES (*Paper I.*).

MONDAY, 2ND APRIL:—MORNING, 9 A.M.

Examiner,.....HENRY T. BOVEY, M.A., M.INST.C.E.

1. If any number of forces are acting in one plane, shew that their moment with respect to a given point may be represented by the intercept between the first and last sides of the funicular polygon of the line drawn through the given point, parallel to the resultant of the forces.

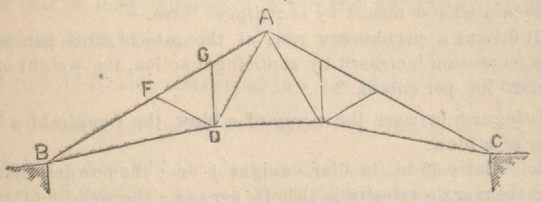
Vertical loads of $7\frac{1}{2}$, 12, 12, 12, 12 tons are concentrated upon a horizontal beam of 25 ft.-span at distances of 18, 108, 164, 216 and 272-ins., respectively from the left support; find by *scale measurement* the bending moment at the centre of the span. If the loads travel over the beam at the given distances apart, determine *graphically* the *maximum* bending moment at the same section.

2. A Howe truss of 80-ft. span and 8-ft. deep has eight panels. The loads at the panel points of the lower chord counting from one end are 10, 10, 6, 6, 4, 4, and 4-tons respectively. Draw the funicular polygon, and determine, *graphically*, the stresses in the members of the 3rd panel, met by a vertical plane. Shew by dotted lines the changes in the diagram, when the five intermediate loads are omitted.

3. A frame is composed of a horizontal top beam A B C D 30-ft. long, two vertical struts each B E and C F, each $2\frac{1}{2}$ ft.-long, and three tie rods

A E, E F and F D, of which E F is horizontal and = 10-ft. A single load of 5 tons is concentrated at B. Explain how you would provide for the shear between B and C, and find the stresses in all the members of the frame.

4. The Figure represents the skeleton diagram of a roof truss. The rafters A B, A C are inclined at 60° to the vertical, and are each 40-ft. in length. The foot C rests on rollers, and the foot B is fixed. The strut

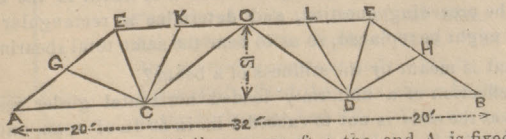


D G is vertical, is 10-ft. long, and is equal to the strut D F in length. Also A G = G F = 10-ft. The dead load carried by the rafters is 120-lbs. per lineal ft. Provision has also to be made for a normal wind pressure upon A B of 300-lbs. per lineal ft. Draw the stress diagram, and shew how it will be modified if the strut D G is removed.

5. A roof of 15 ft. span is supported on simple triangular trusses with rafters sloping at 30° and °. The trusses are 3-ft. apart, and the roofing weighs 20-lbs. per sq.-ft.; find the thrust on the roof. Also draw bending moment and shearing force diagrams for one of the rafters.

6. The two back-stays of a derrick-crane are each 38-ft. long; the angle between their horizontal traces = 2 tan. $^{-1}\frac{5}{12}$; the height of the crane post is 35-ft.; the length of the jib is 40-ft.; the throw of the crane is 20-ft.; the weight to be lifted = 4-tons; determine the stresses in the members of the crane and the upward pull at the foot of each back-stay when the plane of the jib and post (*a*) bisects the angle between the horizontal traces of the back-stays, (*b*) passes through a back-stay. Give suitable dimensions for the different members, assuming 800-lbs. per sq. in as a safe working stress.

7. The Figure is a skeleton diagram of a roof truss of 72 ft. span and 12-ft. deep; G, K, L, H are respectively the middle points of A E, E O, O F, F B; A E = E O = O F = F B = 20-ft.; the trusses are 12-ft. C to C; the dead weight of the roof = 12-lbs. per sq.-ft.; the normal wind pressure



upon A E may be taken = 30-lbs. per sq. ft.; the end A is fixed and B is on rollers; draw a stress diagram. Shew by dotted lines how the stress diagram is modified with rollers under A, B being fixed.

THIRD YEAR AND B.A. Sc. EXAMINATIONS.

(Courses of Civil, Mechanical and Mining Engineering.)

THEORY OF STRUCTURES (*Paper II.*).

THURSDAY, APRIL 5TH.—MORNING, 9 A.M.

Examiner, ...HENRY T. BOVEY, M.A., M.INST.C.E.

1. Explain what is meant by centrifugal force.

A belt driving a circular saw runs at the rate of 50-ft. per sec. How much is its tension increased by centrifugal action, the weight of leather being .0325 lbs. per cub. in.?

2. Distinguish between the *energy* of a blow, the *impulse* of a blow and the *force* of a blow.

A rifle bullet 0.45-in. in diar. weighs 1 oz.; the powder charge is 85 grains; the muzzle velocity is 1350 ft. per sec.; the weight of the rifle is 9-lbs. Neglecting twist determine (*a*) the energy of 1-lb. of powder, (*b*) the energy expended on the bullet, (*c*) the energy expended on the shoulder If the bullet loses $\frac{1}{3}$ of its velocity in its passage through the air, find the average force of the blow on a target into which the bullet sinks .125-in.

If there is twist of 1 in 20-in., find the charge to give the same muzzle velocity, the length of the barrel being 33-ins.

3 Discuss the influence of "fluctuation of stress" upon the strength of a material.

A revolving horizontal shaft overhangs one of its bearings and is loaded at the free end. Compare the co-efficients of strength to be used in calculating its diar.

4. A cast-iron channel beam having a web 12-ins. wide and two sides each 7-ins. in height, the metal being everywhere 1-in. thick, crosses a span of 14-ft. What uniformly distributed load will the beam carry, (*a*) with the web downward, (*b*) with the web uppermost? What will be the max. compressive stress on the metal?

(co-efficient of tensile strength = 2240-lbs. per sq.-in.)

5. Shew how to determine the "intensity of shear" at any point in a transverse section of a beam acted upon by forces perpendicular to the direction of its length.

Compare the max. and average intensities of shear in the channel section of the preceding question, and determine a rectangular section by which it might be replaced, so as to bear the same total shearing force.

6. What is meant by the stiffness of a beam?

The deflection of a uniformly loaded horizontal girder resting upon supports at the ends is not to exceed 1-in. in 50-ft. of span, and the stress in the material is not to exceed 400-lbs. per sq.-in.; find the ratio of span to depth; E being 1,200,000-lbs. per sq.-in., and the neutral axis at half the depth of the girder.

7 Enunciate and prove Gordon's Formula. What modification of the formula was introduced by Rankine?

Rolled iron joists are supported on cast-iron columns 24-ft. C. to C., and are spaced 24-ft. C. to C.; the load upon the flooring is 50-lbs. per sq. ft. Give suitable dimensions for the joists and columns, the latter being 18-ft. high.

8. Shew that a long pillar fixed at one end and free at the other becomes unstable when the load $= \frac{2.E.I.}{L^2}$ approx.

A steel strut 10-ft. long consists of two tees, each 4 ins. x 4-ins. x $\frac{1}{2}$-in.; find the working load taking f = 60,000 lbs., and a, $= \frac{1}{40,000}$, and 6 a factor of safety. Also find the deviation of the line of action of the load from the axis of the strut, so that the max. stress may not exceed 10,000-lbs. per sq.-in.

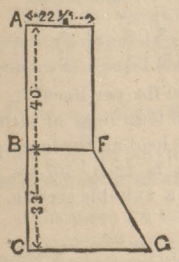
9. Prove that the intensity of stress upon a plane at any point within a strained solid is the resultant of two constant intensities, of which one is perpendicular to the plane, and also prove that the angle between the two constant intensities is double the angle between the plane and the plane of greatest principal stress.

At a point within a strained solid, the resultant stress upon one plane is a tension of 50-lbs. per sq. in. and its obliquity is 30°, and upon a second plane is a compression of 150-lbs. per sq. in. with an obliquity of 45°; find, (*a*) the principal stresses, (*b*) the angle between the two planes, (*c*) the plane upon which the resultant stress is a shear, and the amount of the shear.

10. t is the thickness of the horizontal bed of a wall, R is the total pressure on the bed per unit of breadth; x is the distance from the centre of resistance of the bed to the most compressed edge; f is the greatest intensity of pressure on the bed; shew that f is equal to

$$\frac{2}{3}.\frac{R}{x} \text{ or to } \frac{2.R}{t}.\left(2 - \frac{3.x}{t}\right) \text{ according as } x \lessgtr \frac{t}{3}$$

(*a*)



The Figure represents the section of the upper portion of a masonry dam, which has to retain water level with the top of the dam. The face AC is plumb for a depth of 73-ft. The width of the section is constant and = 22½-ft., for a depth AB = 40-ft. Find the max. stress in the masonry at the horizontal bed BF. With the same maximum stress, what should be the width of the horizontal bed CG, FG being straight?

B. A. Sc. EXAMINATIONS.

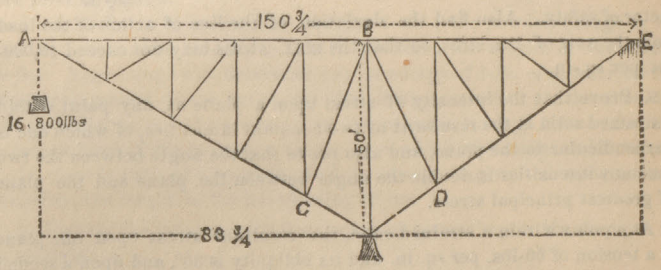
(Course of Civil Engineering.)

THEORY OF STRUCTURES (*Paper III.*).

MONDAY, APRIL 9TH:—MORNING, 9 A.M.

Examiners,..... { HENRY T. BOVEY, M.A., M. INST. C.E.
P. A. PETERSON, M. INST. C.E.

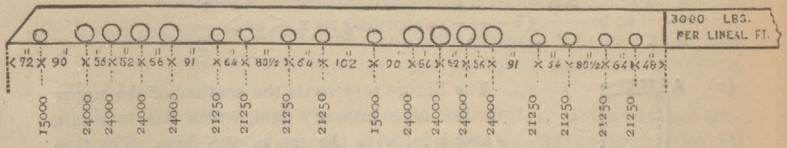
1. The figure is a skeleton diagram of the shore portion of one of the trusses for a cantilever highway draw-bridge. The height of truss over pier is 50-ft., and the length of each panel is $16\frac{3}{4}$-ft. The width of the roadway is 15-ft., and the load is 80-lbs. per sq.-ft. When the opening of



the bridge begins, there is an additional load of 16,800-lbs. (from weight of centre span) at the point A of each cantilever. Determine the vertical pull at E, assuming the stress in B C = that in B D.

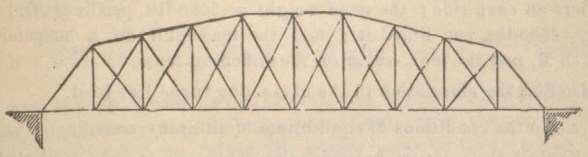
The centre span is 48 ft., sketch a suitable truss, giving the stresses in the several members.

2. The floor beams of the Sault Ste. Marie Bridge are 30-ins. deep, and designed to carry a load as per diagram in addition to the weight of the



flooring, stringers, etc., which may be taken at 800 lbs. per lineal ft. The load is transmitted to the floor beams by means of four lines of stringers which are so spaced as to throw *two-thirds* of the load on the inner pair; the latter being 3-ft. C to C. The panel length is 23 ft. $10\frac{3}{4}$-ins.; the clear width between posts is 16 ft. 6 in. Sketch a suitable section, with dimensions, for the beam.

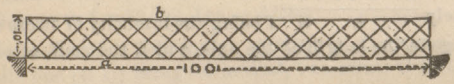
3. The figure represents one of the trusses of the Sault Ste. Marie Bridge the panel length being 23′ 10¾″, the depth of the two centre panels 40-ft., and of the two end posts 27-ft.; the panel dead load = 27,000 lbs.; the panel live load for the chords = 40,000 lbs.; the panel live loads for the



diagonals in order are 6,000, 47,200, 40,200, 43,400, 45,800, 37,100, 36,000, 36,000, 36,600 lbs. Determine the maximum stresses in all the members of the 4th panel from one end.

4. Deduce a formula giving the diagonal stresses in a bowstring truss with parabolic compression chord.

5. Explain how to determine the stresses in the several members of a lattice truss.



The Figure represents a lattice truss of 100-ft. span, 10-ft. deep, and with four systems of right angled triangles. The max. stress in ab is 16-tons; the live load may be taken at 1-ton per lineal ft.; find the dead load.

B.A. Sc. EXAMINATIONS.

THEORY OF STRUCTURES (*Paper IV.*).

MONDAY, APRIL 9TH:—9 A.M.

Examiner,.....HENRY T. BOVEY, M.A., M. INST. C.E.

1. Taking the weight of the chains, platform and suspension rods of a suspension bridge as a uniform load per foot-run, shew that the curve of the chains is a parabola. If the span = l, the total uniform load = W, and the dip = $\frac{l}{12}$, shew that the max.-tension = 1.58 W, the minimum tension = 1.5 W, the length of the chain = 1.018 l, and find the increase of dip corresponding to an elongation of 1-in. in the chain.

2. If there are 2 n suspenders in the above bridge, shew that their total length = $y\,\frac{n + 1.2n + 1}{3 . n}\,y$ being the length of the longest suspender.

3. What is the object of a stiffening truss? Shew how to determine the shearing force and bending moment at any point of a stiffening truss. How will these results be modified by hinging the truss at the centre?

Ex.—A suspension bridge of 240 ft.-span, 20-ft. dip, and with 49 suspenders on each side; the dead weight = 3000-lbs. per lineal ft.; the live load =2000-lbs. per lineal ft.; find the max.-pull on a suspender, the max.-B M, and the max.-shear on the stiffening truss.

Also find the elongation in the chain due to the live load.

4. State the conditions of equilibrium of an arch vousvoir.

5. Explain the relation between the *common catenary* and the *transformed catenary*. What is the object of the latter?

A concrete arch has a clear spring of 75-ft., and a rise of $7\frac{1}{2}$-ft.; the height of masonry over crown =5-ft.; the weight of the concrete =144-lbs. per cub. ft.; determine the transformed catenary, the amount and direction of the thrust at the springing, and the curvature at the crown and springing.

6. Shew that the deflection of an arched rib of span 2 l and rise k is approximately $\frac{k^2 + 4\,l^2 \,.\, f}{k \quad E}$ f being the intensity of stress corresponding to the change in the length of the axis, and E the cœff. of elasticity.

B.A. Sc. AND THIRD YEAR EXAMINATIONS (*Advanced Course*).
THEORY OF STRUCTURES (*Paper I.*).

THURSDAY, 5TH APRIL :—9 A.M.

Examiner,.....HENRY T. BOVEY, M.A., M.INST.C.E.

2. A beam of span l is fixed at the two ends and loaded at the centre and at points equidistant from the centre with three weights each = W. Find the deflection at the centre.

Hence shew that if there are n pairs of such weights equably distributed and equidistant from the centre, the total central deflection $= \frac{n}{96} \cdot \frac{W.\,l^3}{E.\,I}$

2. A beam AB of span l, carrying a uniformly distributed load of intensity w, is merely supported at B but is imperfectly fixed at A, so that the neutral axis at A makes an angle with the horizon = arc tan $\frac{1}{48} \cdot \frac{w.\,l^3}{E.\,I}$

The end B is lower than A by an amount $\frac{w.\,l^4}{32.\,E.\,I}$; find the reactions. and also find by how much B must be lowered so that the whole of the weight may be borne at A.

3. Deduce an expression for the "work done" in bending a beam.

Find the work done in bending the beam in the preceding Question.

4 M_1 M_2 M are the bending moments at three consecutive suppor A, B, C of a continuous girder of n spans; l_1, l_2, are the lengths of the corresponding spans AB and BC, which are respectively loaded with weights (P) and (Q) concentrated at points distant (p) and (q) from the ends A and C; shew that,

$$M_1 l_1 + 2M_2 (l_1 + l_2) + M_3 l_2 = -\Sigma\frac{P.p.}{l_1}(l_1^2 - p^2) - \Sigma\frac{Q.q.}{l_2}(l_2^2 - q^2).$$

Four wheels each loaded with 12-tons, and spaced 5, 4 and 5-ft. aparts *in order*, travel over a continuous girder of two spans, the one 30-ft. long and the other 20-ft. long; place the wheels so as to throw a max. B. M. on the centre support, and find the corresponding reactions.

Also draw a diagram of bending moments, and find the max. deflection of the 30-ft. span.

5. Shew that the minimum pressure which will bend a strut of length l fixed at the lower end and perfectly free at the other is $\frac{1}{4} \cdot E.I\frac{\pi^2}{l}$

A solid wrought iron strut of 4-ins. diar. is 20-ft. high; find the deviation, to produce a max. stress of 10,000 lbs. per sq -in. with a load of 16,000 lbs. (factor of safety = 8, f. = 36,000, $l \div a = 2250$.)

6. A frame consists of a horizontal member A B, three ties A C, C D, D B, the middle one (C D) being horizontal, two struts C F, D G, and two diagonals F D, G C; A F = F G = G B = a; the load at F = W_1, at G = W_2; determine the minimum strain-length (*stress in a member* × *ts length*) of the frame, assuming the tensile and compressive unit stresses. to be the same.

7. Shew how to determine the principal stresses at any point in the material of a thick, hollow cylinder.

The cylinder of an hydraulic press is 4-ins. internal and 8-ins. external diar.; if the internal pressure is 1-ton per sq.-in., find the principal stresses at the internal and external surfaces.

B.A.Sc. EXAMINATIONS (*Advanced Course*).

(*Course of Civil Engineering.*)

THEORY OF STRUCTURES (*Paper II.*).

THURSDAY, APRIL 5TH:—2 P.M.

Examiner,..... .....HENRY T. BOVEY., M.A., M. INST. C.E.

1. A parabolic rib of uniform section, span l and rise k, is hinged at the ends A and B. A weight is concentrated at a point whose horizontal distance from the crown is x. Shew that the corresponding linear arch consists of two straight lines AB, BC, the vertical distance between the point of intersection C and AB being $\frac{32}{5} \cdot \frac{k.l^2}{5.l^2 - 4x^2}$

In an arch of 50 ft. span and 10-ft. rise, a weight of 1-ton is concentrated at a point whose horizontal distance from the crown is 10-ft. Find the total thrust along the axis of the rib on each side of the given point, allowing for a change of 60° from the mean temperature (α=.0000694).

2. A parabolic rib of uniform depth and stiffness is hinged at both ends and in addition to a uniformly distributed load of intensity w is subjected to a rolling load of intensity w_1. Shew how to determine the maximum bending moment on the rib.

The steel ribs for the Harlem River bridge have a clear opening of 510-ft., a rise of 90-ft., a depth of 13-ft., and are spaced 14 ft. C to C. The dead weight per lineal ft. is estimated at 3[illegible],000 lbs., and the live load at 8,000 lbs.; a variation in temperature of 75° F from the mean is also to be allowed for; determine the max. B.M. (assuming I. constant), and the max. deflection. E = 26,000,000 lbs.

Shew show to deduce the play at the hinges.

3. Determine the minimum *strain* length for a double intersection Pratt truss of 154 ft. span and eleven panels.

Panel engine load = 44,000 lbs., Panel live load = 27,500-lbs., Panel dead load= 13,200-lbs. Assume working tensile stress = working compressive stress = 8,000-lbs. per sq in.

4. The accompanying diagram represents one of the trusses of the Jubilee Bridge over the River Hooghly. Find the reactions at the supports, the points of contrary flexure in the side spans, and shew how to determine the stresses in the several members of the truss.

B.A. Sc. EXAMINATIONS.

(Civil, Mechanical and Mining Engineering Courses.)

HYDRAULICS (Paper I).

MONDAY, 16TH APRIL:—9 A.M.

Examiner,..... HENRY T. BOVEY, M.A., M.INST.C.E.

1. What is meant by *coefficient of resistance* (C_r)? *Coefficient of velocity* (C_v)? *Coefficient of contraction*? When water flows through an orifice in a thin plate, shew that $C_r + 1 = 1 \div C_v^2$.

The velocity of the water issuing from an orifice under a head of 16 ft. was observed to be 20 ft. per sec.; find the coefficients of velocity and resistance.

2. A divergent mouthpiece gradually enlarges from the diar. of the contracted section to the diar. AB at which it becomes cylindrical. Shew that the discharge depends *only* upon the diar. AB. Explain how this result is modified in practice, and deduce an expression for the maximum discharge.

3. Find the discharge through a triangular notch of depth and breadth b. Why is a triangular notch more accurate for gauging purposes than a notch of rectangular section?

4. The head over a weir l ft. long is n ft., and the water pproaches the weir with a velocity of u ft. per sec.; shew that the discharge over the weir $= \frac{10}{3} l. \left\{ \left(h + \frac{u_2}{64}\right)^{\frac{3}{2}} - \frac{u^3}{512} \right\}$, end contractions being neglected and g being taken = 32, and c = ·625. How is the result affected when end contractions are taken into account? A stream, 96 ft. wide and 3 ft. deep. discharges 3600 gallons per sec.; find the height of the weir which will increase the depth of the stream to 5 ft.

5. If the flow through a smooth pipe is *steady*, shew that the total energy of the water remains constant throughout the pipe. Water travels along a smooth pipe in which there are no sudden alterations of form. At a point A the pressure per sq. ft. is 1250 lbs., and the velocity 4 ft. per sec.; find the vertical height above A of a point at which the diar. is 8 ins., and the pressure doubled.

6. What is meant by the "loss of energy in shock"?

A horizontal pipe in three 16 ft. sections suddenly enlarges from a section of 24 sq. ins. to a section of 48 sq. ins., and then returns suddenly to its orignal section. Find the total loss of head when the pipe is discharging 1500 gallons per minute.

7. 20 H. P. are delivered at the end of a 3-ins. pipe, 3 miles long, under an accumulator pressure of 750 lbs. per sq. in.; taking the coefficient of resistance = ·0075, find the efficiency of the pipe.

8. Three reservoirs are connected by a branched pipe. Given—Q_1, Q_2, Q_3, h_1, b_2, h_3, shew how to find v_1, v_2, v_3, r_1, r_2, r_3.

9. Water flows *steadily* and with *uniform velocity* along an open channel of constant section; obtain an expression giving the loss of head due to frictional resistance, and clearly state all the assumptions you make. What fall must be given to a canal of rectangular section 8 ft. wide, 4 ft. deep and 1 mile long, so as to convey 96 cub. feet per section? (f. = ·005).

If the channel is a storm overflow from a reservoir of 40,000 sq. ft. superficial area; find the time in which the level of the reservoir will sink to the bottom of the channel, supposing all other inlets and outlets closed.

B.A.Sc. EXAMINATIONS.

(Courses of Civil, Mechanical and Mining Engineering.)

HYDRAULICS (*Paper II.*).

MONDAY, 16TH APRIL:—2 P.M.

Examiner,..... HENRY T. BOVEY, M.A., M.INST.C.E.

1. What is meant by saying that water possesses energy?

A fall of 16-ft. yields 16 cub. ft. of water sec., and drives a machine

using only 10 cub. ft. The water leaves the machine with a velocity of 8-ft. per sec., and the frictional resistance absorbs 1000 ft. lbs. of work. Determine the efficiency of the machine.

2. An overshot wheel receives 10 cub. ft. of water per sec. at 12°, under a head of 30-ft., and makes 5 revolutions per min.; the crown is 12-ins., and the linear velocity of the circumference is one-half that due to the fall; find the radius, width of wheel and number of buckets.

Spilling begins at 148° and the bucket is empty at 160°; find the total effect of impact and weight, assuming that the buckets are only $\frac{2}{3}$ths. full over the arc in which the spilling takes place.

3. Shew how to determine the mechanical effect of a breast wheel.

4. A jet of water moving with a given velocity strikes a plane perpendicularly. How much of the energy of the jet is utilized in driving the plane with given speed.? What is the max. efficiency? What is the corresponding speed of the plane?

5. Given the dimensions of an inward flow turbine (β, γ, d_1, d_2), and assuming the velocity of whirl at the outlet surface to be nil, shew that the efficiency is

$$\frac{2k.\ \cot\gamma}{\tan\beta + 2k.\ \cot\gamma}, \quad \text{where } k = \frac{d_2}{d_1}.$$

Given — $r_1 = 2r_2 = 24$ ins., $d_1 = \frac{d_2}{2}$, $\gamma = 15°$ & $\alpha = 90°$,

determine the revolutions, useful work, and efficiency.

6. Remark as to the influence of the centrifugal head upon the efficiency n inward-flow and outward-flow turbines.

B.A.Sc. EXAMINATIONS (*Advanced Course*).

(*Course of Civil Engineering*).

MONDAY, 23RD APRIL:—MORNING, 9 A.M.

HYDRAULICS.

Examiner, ... HENRY T. BOVEY, M.A., M.INST. C.E.

1. In a garden splinkler the coeffi. of hydraulic resistance = .125; find the max. efficiency and shew that the corresponding speed is that due to *twice* the lift.

2. A cylindrical tank 16-ft. high and 4-ft. in diar. is full of water and discharges through a circular orifice of *one* sq. in area at the bottom. In what time will the tank be emptied? If water be now allowed to flow in at the rate of $4\frac{1}{6}$ cub. ft. per min., how high will the water rise in the tank?

Obtain the corresponding results when the tank makes 100 revolutions per min. about a vertical axis.

3. Assuming the viscous theory and a uniform stream motion, shew that the *vertical* velocity curve is a parabola with a horizontal axis coincident with the filament of max. velocity.

Hence shew that whatever may be the position of the axis, the mid-depth velocity differs from the mean velocity by the quantity

$$\frac{1}{12} \cdot \frac{\omega . i . h^2}{2 . k .} \cdot \left(= \frac{M}{12} \right)$$

In what manner has this result been utilized in practice?

4. According to Bazin's experiment $M = 36 \cdot 3\sqrt{h.i.}$

Taking this value of M, shew that the general equation of the velocity curve is

$$v = v_2 - 36.3\sqrt{hi} \left(\frac{x - a}{1 - a} \right)^2$$

where

$$x = \frac{y}{h} \text{ and } a = \frac{h'}{h},$$

Assuming the fundamental equation of steady varied motion, discuss the three cases,

$$h > \mu . \frac{u^2}{g} \text{ and } > H$$

$$h > \mu . \frac{u^2}{g} \text{ and } < H$$

$$h < \mu . \frac{u^2}{g} \text{ and } = H$$

B.A.Sc. EXAMINATIONS (*Advanced Course.*)

HEAT AND HEAT-ENGINES.

(*Civil and Mechanical Engineering Courses*).

FRIDAY, 20TH APRIL:—9 A.M.

Examiner, ... HENRY T. BOVEY, M.A., M.INST.C.E.

1. Write down the two fundamental equations of Thermodynamics and state the assumptions involved.

Prove that the latent heat of isothermal expansion is measured by the increase of pressure per unit increase of temperature multiplied by the absolute temperature, the volume being constant.

2. Deduce the equation to an adiabatic for a perfect gas.

3. A gas changes its volume at constant temperature. If the successive volumes are in G.P., shew that the corresponding quantities of heat emitted are in A.P.

4. Prove the relation $\frac{1}{J} = \frac{c_p - c_v}{T} \cdot \frac{dt}{d} \cdot \frac{dt}{dv}$.

5. An engine uses superheated steam at a given pressure p and temperature t, and the expansion takes place along an adiabatic to a point at which the steam is on the point of saturation; deduce the expression giving the rate of expansion.

If the initial pr. is 100-lbs. per sq. in. and the temperature of the steam 343°F, what is the rate of expansion? Also find the work done if the expansion is continued below the point of saturation to a pressure of 75-lbs. per sq. in.

Prove that the isodynamic curve for superheated steam is an equilateral hyperbola.

6. In a mixture of steam and water, L is the latent heat, T is the abs. temperature, and of the heat of the water; shew that there will be condensation, a neutral state or evaporation, according as $a.x \gtreqless T$, x being the weight of the steam, $L = a + b\,T$, and the expansion adiabatic.

1 lb. of steam expands adiabatically from 91 lbs. pr. and 321°F. temp. to 12 lbs. pr. and 202°F. temp; determine the portion condensed.

7. Dry saturated steam expands in a cylinder doing work, between the temperature (absolute) limits T^1 and T^2, shew that the energy of 1-lb. of the steam in ft. lbs. is,

$$J.\left\{ a \log_e \frac{T_1}{T_2} - b\,(T_1 - T_2) \right\} + (p_2 - p_3).\ v_2$$

p_2 being the absolute pressure at end of expansion corresponding to T_2 p_3 the mean absolute heat pressure, J.a=1109550. ft. lbs., J.b.=540.4 ft.-lbs. and v_2 the volume at the end of the expansion.

Example—The steam expands 5-times, the initial pressure being 100-lbs. absolute, and the back pressure 3-lbs. absolute; determine the heat expended per stroke and the efficiency of the steam, the temperature of the feed water being 60°F.

8. In a given engine the work of resistance changes from R to R_1 and the corresponding angular velocity from ω to ω_1; shew that $\omega - \omega_1$ is at least equal to $\frac{d\omega}{2}$, the variation due to the work done upon the fly-wheel assuming that the work of resistance during a semi-revolution is $R^1 - R$.

B. A. Sc. EXAMINATIONS.

HEAT AND HEAT ENGINES (*Paper II.*).

FRIDAY, APRIL 13TH, 1888:—9 A.M.

Examiner, ... HENRY T. BOVEY, M.A., M.INST.C.E.

1. Sketch an eccentric and describe its several parts. What is meant by its throw?

2. Draw a section of a simple slide-valve and ports. For what purpose

is lap given to the slide-valve? What is the angle of advance? What the lead? Given:—travel of valve = 4½-ins.; outside lap = 1-in.; inside lap = ¼-in.; angle of advance = 40°; find the position of the crank at admission, cut-off, release and compression; also find the lead of the valve.

3. With the same angle of advance as in the preceding question, find the rate of expansion in the forward and return strokes, the connecting rod being taken =n

4. Describe Meyer's valve gear, and shew that a resultant circle can always be found with its chords representing the distance between the centres of the two valves.

An expansion valve of 2½-ins. eccentricity is added in the case of Questions, and the two valves cut off steam simultaneously. Determine the max. distance between the valve centres, and also the distance between the centres at beginning of stroke and at half stroke.

5. What is the object of a steam jacket? In what way does the absence of the jacket affect the indicator diagram?

6. State the essential differences between jet and surface condensation of steam.

The tubes for a surface condenser are 6-ft. long, ⅝-in. outside diar. and .05-in. thick. The I H P is 250, how many tubes will be required, and what will be the total cooling surface in sq.-ft., the terminal pr. of exhaus being 5-lbs.?

7. An engine indicating 250 H P uses 30-lbs. of steam per H P per hour, and expands down to 5-lbs. absolute; the temperature of the hot well is 120° F; how much injection water will be required per hour, its original temperature being 60° F?

8. What are the principal essentials of a good steam-engine governor? What advantages attend the use of high speed governors?

In the high-speed governor shewn by the diagram, the weight of each ball = ½-lb.; the weight on the spindle = 79½-lbs.; A B = 5-ins., and A C = C B = 4-ins.; find the tensions in the arms and the speed.

9. Assuming 15,000-lbs. per sq.-in. as the tensile strength of cast-iron and taking 5 as a factor of safety, find the max. working speed and the bursting speed for a cast-iron fly-wheel of 20 ft.-mean diar. and weighing 240,00 lbs., the section of the rim being 160-sq.-ins.

SECOND, THIRD YEAR AND B.A. Sc. EXAMINATIONS.

(*Course of Mechanical Engineering*)

RAILWAY PLANT, ETC.

FRIDAY, APRIL 6TH:—MORNING, 9 A.M.

Examiners,..... ..... { HENRY T. BOVEY, M.A., M.INST. C.E.
P. J. BOLLAND, M.CAN. SOC. C.E.

CAR WORK.

1. Sketch the main frame of a freight car, shewing the principal dimensions.

2. Shew, by means of a sketch, how the weight on the main frame of a freight car is transferred to the axle bearings.

3. Sketch the cross section of an axle box in position.

4. Shew, by a sketch, how the pull is transmitted through the coupling links and pins to the main frame of a freight car.

5. Point out the main differences of construction between a passenger and freight car truck.

6. Shew, by a sketch, with all necessary dimensions, how a steel tyre is secured to centre with Mansell clips.

7. Explain, with sketches, the arrangement of hand brake, levers and rods, in "Stevens' Brake," and in the brake in use on the Grand Trunk Railway.

8. Describe, with explanatory sketches, the triple valve of the Westinghouse air-brake.

9. Enumerate the essential parts of a Westinghouse air-brake for passenger car service, and state their several uses.

10. Give a cross-section of a passenger car truck, with leading dimensions.

FIXED PLANT.

11. Sketch an engine pit suitable for a running shed.

12. Sketch a suitable arrangement of smoke troughs and jacks for ventilating a running shed.

13. Give a sectional elevation of the foundation, circular track, etc. suitable for a 50-ft. turntable.

Make a rough estimate of the weight of the iron-work.

14. Describe the best method of running and moulding cast-iron pipes.

15. Describe, with sketches, a hand power traversing jack.

16. Describe, with sketches, a 40,000 gallon frost proof water tank.

FACULTY OF APPLIED SCIENCE.

B.A. SC. EXAMINATIONS. (*Course of Mechanical Engineering*).

ENGINE PROPORTIONS, ETC.

SATURDAY, APRIL 7TH :—MORNING, 9 A.M.

Examiners, ... { HENRY T. BOVEY, M.A., M.INST.C.E.
JOHN KENNEDY, M. INST.C.E.

1. Make an outline sketch of a condensing double-acting beam engine and add remarks explaining the action and construction of the machine.

2. Describe with sketches, the construction of (*a*) a *throttle* valve, (*b*) a double beat valve, (*c*) a *gridiron* valve, and point out the mechanical purpose fulfilled by each species of valve.

3. Sketch a link motion or any form of reversing gear with which you are familiar, and describe its action on the steam distribution, shewing how the steam may be cut off when the crank makes angles of 45°, 90°, and 120° with the dead centres (choose any suitable dimensions).

4. Given a 30-ins. cylinder, 48-ins. stroke, and an initial absolute pressure of 60-lbs. per sq.-in., determine suitable dimensions, (*a*) for the piston rod, (*b*) for the connecting rod, (*c*) for the crank shaft, also find the number of 1-in bolts required for the cylinder head, the metal in each case being steel.

5. P is the total steam pressure on a piston, Q is the thrust along the connecting rod when it makes an angle ϕ with the line of stroke, f is the coefficient of slide friction, shew that $\frac{P}{Q} = f \sin. \varphi + \cos. \phi$, or $= f.\frac{a}{b} \sin. \phi + \cos \phi$, according as

$$\frac{b = (\text{length of slide})}{a = (\text{distance between guides})} \lessgtr f$$

With the assumption $b > a f$, determine the *mean* efficiency of the mechanism, and the work lost per stroke. Is it usual in practice to assume $b >$ or $< a f$? Why?

Ex. initial pr. per sq.-in. 60-lbs.; 30-ins. cylinder; 48 ins. stroke; connecting rod = 5 cranks; f = ·2.

6. State the leading principles governing the design of the journal bearings of crank-shaft.

7. Describe the construction of a large fly-wheel, and shew by carefully drawn sketches how the segments are connected.

Design the connection and also an arm for a 21-ft. fly-wheel weighing 24,000-lbs., and built in 4 equal segments, the wheel making 50 revolutions per minute.

8. Make sketches of the big end of a connecting rod, (*a*) when the brasses are held in place by a strap, (*b*) when the end is solid, stating the principles which govern its design.

How is the length of the rod affected in each case, by driving in the cotter?

THIRD YEAR AND B.A. Sc. EXAMINATIONS.

(Course of Mechanical Engineering.)

MACHINERY AND MILLWORK.

WEDNESDAY, APRIL 18TH:—MORNING, 9 A.M.

Examiner,.....HENRY T. BOVEY, M.A., M.INST.C.E.

(Fourth year students are required to answer at least three questions in each Part).

PART I.

1. Explain what is meant by a kinematic chain, and shew how the chain is made up in the case of an ordinary horizontal engine.

2. Determine the velocity of the piston of a direct acting engine in terms of the velocity (assumed uniform) of the crank pin centre, for any given position of the crank, and shew how to construct curves of piston velocity. Ex.—connecting rod = 5 cranks = 10 ft.

3. In a Whitworth quick return motion find the proportions, so that maximum return velocity may be $2\frac{1}{2}$ times the cutting velocity, and compare the times of cutting and return.

4. In a drag-link coupling the shafts are 6-ins. apart, the drag-link is 18-ins. long, and the cranks are the one 36-ins. the other 24-ins. long. Determine the angular velocity ratios of the shafts for the four positions in which the leading crank is on the line of centres, and perpendicular to the line of centres. Also find the maximum and minimum velocity ratios.

5. Shew how to determine the length of the radius rod for a parallel motion, and also find the position of the centre of motion of the radius rod which will give a minimum deviation from a straight line.

6. Shew that the work transmitted by a belt passing over a pulley will be a maximum, when it travels at the rate of $\sqrt{\frac{T_2}{3m}}$ — ft. per sec., T_2 being the slack tension and m the mass of a unit of length of the belt. The tight tension on a 20-in. belt, embracing one-half the circumference of the pulley, is 1200 lbs. Find the maximum work the belt will transmit, the thickness of the belt being .2-in., and its weight ·0325 lbs. per cub. in. Coeff. of fn. = ·28.

7. Two shafts 30-ins. apart are connected by two spur wheels, the velocity ratio being $4\frac{1}{2}$. Find the pitch, the number of teeth in the smaller wheel being 10. Describe the form of one of the teeth and find its length, the flank being radial, and arc of approach = arc of recess = $\frac{3}{5}$ pitch.

8. Two shafts 10 ft. apart are connected by a pair of speed pulleys, with crossed belt; the driving shaft makes 60 revolutions per minute; the pulleys are to give two extreme velocity ratios of 8 to 1 and 4 to 1, and two intermediate values; the least admissible diar. is 4 ins. Determine the remaining diars., the length of the belt, and the revolutions of the driven shaft, allowing a slip of 2 per cent.

9. What is the object of balancing part of machinery? Would you balance the forces parallel to the line of stroke or those perpendicular to the line of a stroke, (*a*) in a vertical engine, (*b*) in a horizontal mill engine (*c*) in a locomotive? Give reasons for your answer.

PART II. (*For candidates for B.A.Sc. only*).

10. A uniform shaft of length l and specific weight w transmits work; shew that its efficiency is $1 - \frac{2\omega f}{s} l$

f being the coefficient of fn. and s the safe stress in the metal. The efficiency of a wrought-iron shaft is $\frac{1}{2}$; the working stress in the metal is 7200 lbs. per sq. in. the coefficient of fn. is ·125; how far can the work be transmitted?

11. Shew that the elementary work absorbed by the friction between a pair of teeth in outside gearing is

$$\frac{M f \left(\frac{1}{r_1} + \frac{1}{r_2}\right) p \, \Delta\theta}{\sin\beta \pm f\left(\cos\beta + \frac{p}{r_1}\right)}$$

the upper or lower sign being taken according as the contact is in advance of or behind the line of centres. In the latter case explain the result when $\sin\beta = f\left(\cos\beta + \frac{p}{r}\right)$

Hence also show that if the contact is in advance of the line of centres the work absorbed in one revolution is approximately $2\pi^2 M \frac{f}{n.}\left(\frac{1}{n_1} \pm \frac{1}{n_2}\right)$ n_1 and n_2 being the number of teeth corresponding to r_1 and r_2 respectively. f being ·15. M = driving couple, r_1 = rad. of driver, r_2 = rad. of follower, f = coefficient of fn., $\Delta\theta$ = elementary angle turned through p = distance between points of contact of pitch circles and of teeth, β = angle between line of centres and normal to surface of contact of teeth.

Apply to Question 7.

12. Shew how to determine the efficiency of the wheel and axle.

13. Describe Prony's dynamometer.

14. A flexible band, embracing $\frac{3}{4}$ths of the circumference of a brake pulley keyed on a revolving shaft, has one extremity attached to the end A of a lever A O B, and the other to the *fixed* point O (between A and B) about which the lever oscillates. The pressure between the band and

pulley is effected by a force applied at right angles to the lever at the end B. Shew that the time in which the axle is brought to rest is about $2\frac{1}{2}$ times as great when revolving in one direction as in the opposite ($f = .2$).

15. The pressure equivalent to the weight of the reciprocating parts of an engine is 3 lbs. per sq. in.; the stroke is 36 ins.; the number of revolutions per min. is 45; the back pr. is 2 lbs. per sq. in.; the absolute initial steam pressure is 60 lbs. per sq. in.; the rate of expansion is 3; find the pressure necessary to start the piston, and also the effective pressure at each $\frac{1}{8}$ of the stroke.

16. The accompanying figure is the indicator diagram of a direct acting condensing engine. Construct the polar curve of crank effort, assuming the connecting rod = 6 cranks.

B. A. Sc. EXAMINATIONS (*Advanced Course.*).

COURSE OF MECHANICAL ENGINEERING.

WEDNESDAY, 18TH APRIL :— 2 P.M.

Examiner,.....HENRY T. BOVEY, M.A., M.INST.C.E.

1. Discuss the influence of initial condensation in an engine.

2. Shew that in all forms of teeth for wheels the common normal at the points of contact of the teeth must always pass through a fixed point on the line of centres.

3. What are Axoids? In the four-link chain A, B, C, D, the opposite links A and C being equal but not parallel, shew that the centroids for A and C are equal ellipses, and those for B and D, equal hyperbolæ.

4. Investigate an expression for the total work to be communicated to the driving axle of a tilt-hammer, and explain how to design a fly-wheel for such a machine.

5. Shew that the relation between the power (P) and weight (Q) in the case of a block of equal pulleys (as per diag.), is of the form of $P = \alpha + \beta Q$, when the rigidity of the rope is taken into account.

B.A.Sc. EXAMINATIONS.

(*Course of Mechanical Engineering.*)

CUTTING TOOLS, ETC.

THURSDAY, MARCH 29TH, 1888 :—9 A.M.

Examiners,..... { HENRY T. BOVEY, M. INST. C E.
P. J. BOLLAND, M.CAN. SOC.C.E.

1. Distinguish between *shearing*, *paring*, and *scraping* tools, and give sketches of different tools to show their special characteristics.

2. Explain how the cutting efficiency of a tool is affected by the manner

in which the tool is presented to its work. Calculate the work required to overcome the friction between the shaving and the tool as the tool advances. Example:—angle of relief = 10°, angle of tool edge = 70°, angle between face of tool and edge of shaving =70°, coeff. of fn.=.35.

3. Describe the kind of work to which planing, shaping and slotting machines are severally adapted, and give a general description of a slotting machine.

4. Give an approved method of planing portions of cylindrical surfaces, e.g., the bosses at the ends of cranks and levers.

5. Explain the use of the following different parts of a lathe:—*Shears, Head Stock, Tail Stock, Live Spindle, Dead Spindle, Live Centre, Dead Centre, Face Plate, Back Gear, Lead Screw, Feed Screw, Change Wheels.*

6. Explain, *with sketches*, how the back gear of a Lathe is made to drive the live spindle, and vice versa.

7. A Lathe has single gear and its lead screw has 98 threads per inch: what wheels will be required to cut 18, 16 and 13 threads per inch, respectively?

8. Give a sketch of the dead centre of a lathe, and shew two or three ways in which it can be successfully drawn out of its socket.

9. Explain the nature and use in lathe cutting tools of *rake, clearance top face, bottom face* and *heel*. What considerations regulate the proper shape of slide-rest cutting tools?

10. Describe different methods of cutting V threads, and explain how the tools are gauged, etc.

11. Point out the defects of ordinary forms of drills. Describe a Morse Twist drill, and explain how the cutting edges should be ground to meet the requirements of clearance, etc. Shew, by a sketch, the ill effect of bad grinding.

SECOND YEAR.

DESCRIPTIVE GEOMETRY.

THURSDAY, MARCH 29TH:—2 TO 5 P.M.

Examiner,.....C. H. McLEOD, M.A.E.

1. There is an equilateral triangle of 4 in. side. From a point in one of the sides, 2.5 in. distant from an angle, draw a straight line so that the two parts shall be of equal area.

2. Construct the epicycloid generated by a circle of 2 in. diameter rolling on a circle of 4 in. diameter.

3. A cone has an apex angle of 30°, find the section caused by a plane which contains the apex and makes an angle of 10° with the axis. (*a*) Show the development of the cone with the line of section.

4. Find the plan and elevation of an hexagonal prism when its axis is inclined at 45° to the horizontal and the edge of an end which is in the horizontal makes an angle of 30° with the vertical.

5. Project a screw-bolt on a plane parallel to its axis. The outside diameter is 2 in.; the pitch, two threads to an inch, and the section of the thread an equilateral triangle.

6. There is a point one inch above the horizontal and half an inch from the vertical, and through the point there is a line which makes an angle of 45° with the horizontal and 30° with the vertical. Find the projections of the line and the traces of a plane which contains the point and is perpendicular to the line.

(*a*) What are the inclinations of this plane to the planes of projection.

7. Show that the axes in Isometric projection make angles of 120° with each other

---

SECOND YEAR.

MECHANISM.

TUESDAY, APRIL 3RD :—MORNING, 9 TO 12.

Examiner,.....C. H. MCLEOD, MA.E.

1. Determine the ratio between the *angular* velocities of a crank and its connecting rod at any instant. (*a*) When is the velocity of the cross-head end of the rod at a maximum ? Why ?

2. Show how the *slit-bar motion* is employed to obtain a quick return. Give an example of its use, and a sketch showing how the principle is applied to practice.

3. Obtain the position of the *parallel point* in Watt's parallel motion. (*a*) Show where the point is situated when the levers are on the same side of the link, and apply the pantograph to this case to obtain a second parallel point.

4. A pin wheel works with a rack. What is the form of the teeth on the rack. (*a*) The pinion is six inches in diameter, and the pins, of which there are twelve, are half an inch in diameter. Obtain the line of the tops of the teeth on the rack when the arc of contact is one and one-half times the pitch.

5. Explain how you would apply the *lazy tongs* to reduce the motion of a steam engine piston for indicating purposes. (*a*) Prove its applicability.

6. Obtain an epicyclic train of which the first and the last wheels are on the same axis and make respectively 40 and 50 revolutions per second. (*a*) Show how you would arrange to make this velocity ratio variable.

7. Show that the velocity ratio is constant and unity in the Oldham coupling. (*a*) What is the angular velocity of the cross ?

8. Sketch the following :—(*a*) An arrangement of toggle-joints to give four blows for each revolution of the driving crank. (*b*) The driving pulleys of a plainer, having a quick return. (*c*) A reversing gear for a locomotive.

SECOND YEAR.

SURVEYING.

SATURDAY, APRIL 14TH :—2 TO 5 P.M.

Examiners,..... { C. H. McLEOD, Ma E.
W. J. SPROULE, Ma E.

1. Measure the magnifying power of the telescope of the level before you.

2. Obtain the difference in elevation between the axis of the level and the point upon which the rod is resting. Suppose the instrument to be in adjustment.

3. Measure the angle at the transit instrument which is subtended by the two chain-pins. Make one measurement of three repetitions.

4. Suppose an instrument is required to be constructed after the manner of the optical square, to set out angles of 60°, how would you place the mirrors? Prove it.

5. Suppose a compass survey has been made of an irregularly bounded area, explain how you would calculate the area directly from the notes? Illustrate your answer by a sketch and the necessary tabular forms. State how you would obtain all the quantities employed.

6. Why are theodolites supplied with two or more verniers ?

7. Explain the most accurate method known to you, by which to mark out a true meridian line.

8. How would you test for collimation error in a transit, and how would you adjust for it ? (*a*) How does this error affect the prolongation of a line, and what means would you adopt to secure the straightness of your line ?

9. How would you test for the collimation of the telescope in the Y level ? (*a*) Is the instrument before you in adjustment in this respect ?

10. It is proposed to dam a stream and make a mill power by raising the water sixteen feet. How would you proceed to find the area that would be overflowed by back water, in order to estimate the land damages ?

11. How would you check the accuracy of a survey made by the chain only ? Give means of checking when angular instruments are used.

12. There is a large and irregular pile of macadamizing stone which has been furnished by contract and is worth about $1.25 per cubic yard. How would you proceed to measure it for final estimate and payment of the contractor ?

SECOND AND THIRD YEARS.

MECHANICAL WORK.

SATURDAY, APRIL 7TH :—MORNING, 9 TO 12.

Examiner,..... C. H. MCLEOD, MA.E.

1. Sketch the forms of lathe tools named and state the kind of work in which each should be used: (*a*) "Round-nosed," (*b*) "Square-nosed," (*c*) "Spring," (*d*) "Side."

2. State approximately the speed in feet per minute at which "roughing cuts" may be taken from small work in,—(*a*) steel, (*b*) wrought iron (*c*) brass.

3. Describe the process of cutting a screw by hand in the lathe.

4. How are piston rings made? Suppose one side of the ring to be thicker than the other.

5. Describe a process of manufacturing reamers.

6. Explain the use of the square centre in lathe work.

7. What is a keyway drill, and what is its action?

8. Suppose a large cast iron surface is to be "chipped," how would you proceed?

9. What are "drifts?" Under what circumstances is their use admissible?

10. Mention some of the advantages of twist drills, and compare them with the common drill as to duty.

SECOND YEAR.

DESCRIPTIVE GEOMETRY.

THURSDAY, MARCH 29TH :—2 TO 5 P.M.

Examiner,..... C. H. MCLEOD, MA.E.

1. The edges of the base of a regular pentagonal prism measure one inch, and the length of the prism is two inches. Find its plan when three consecutive angular points of the base are 0."7, 1."2 and 0."9, respectively, above the horizontal.

2. Two faces of a trihedral angle measure respectively 45° and 60°; and the angle opposite the 45° face is 50°. Find the other parts.

3. A sphere penetrates a cone so that the surface of the sphere touches the axis of the cone at a point two inches from the apex. The apex angle is 60° and the diameter of the sphere two inches. Fine the line of penetration.

4. Find the traces of a tangent plane to the solids in question (3), when the plane containing the axis of the cone and the centre of the sphere is vertical and at 45° to the vertical plane of projection.

5. Construct a map of a sphere of four inches diameter by Lorgna's (equal areas) method, showing each 30th degree in latitude and longitude.

6. Show the shadow cast on the horizontal by the objects in question (3), when the rays are inclined to the horizontal at 30° and their horizontal projections are at right angles to the plane containing the axis of the cone and the centre of the sphere.

7. Project perspectively a cylindrical shaft 10 ft. in height and 4 ft. in diameter when standing on an octagonal plinth of 2.5 ft. side. One face of the plinth makes an angle of 30° with the picture plane.

8. Find the perspective of the shadow on the horizontal, by the object in question (7), when the rays make angles of 30° with both the planes of projection.

THIRD YEAR.

MACHINERY.

FRIDAY, APRIL 13TH:—9 TO 12 A.M.

Examiner,.....C. H. McLEOD.

1. Design a connecting rod and cross-head for a stationary steam engine:—Steam pressure 70; diameter of piston 12 in.; stroke 36 in.

2. Design a pulley of cast iron, for leather belting, having a velocity of fifty feet per second and transmitting twenty horses' power.

THIRD YEAR.

SURVEYING.

SATURDAY, APRIL 14TH:—2 TO 5 P.M.

Examiners,..... { C. H. McLEOD, Ma.E. / W. J. SPROULE, Ma.E.

1. In locating the St. Gabriel Levee at Point St. Charles, in 1887 the tangent lines KI, IM, were on the ground. It became necessary to join them by a compound curve, beginning with a 30° curve ($r = 193{\cdot}2$ ft.), having KI tangent at K, and ending with a 7° curve ($r = 819{\cdot}0$ ft.) having IM tangential at M. The intersection angle at I was 38° 44′ and the distance IK, 90 feet. Find the lengths of the curves and the distance IM. (*a*) Give your method of running the compound curve on the ground,

2. When an obstacle, such as a river, occurs in the measurement of a base line for a geodetic survey, how do you proceed? Obtain a formula for computing the distance across the obstacle.

3. In trigonometrical levelling, the zenith distance was measured at one of the stations only. What are the other quantities to be noted? Obtain a formula for computing the difference in elevation of the stations.

4. Describe in detail the measurement of an angle in a primary triangulation survey, and show how the result is corrected. Assume that the other parts of the triangle are known and the observations which have been made in the measurement of the other angles in your possession.

5. How is the distance between stations, in a triangulation survey, governed by the height of the signals? Express the connection by a formula.

6. Describe the complete survey of a tidal harbour, for navigation purposes.

7. Adjust the sextant. (*a*) How would you obtain its index error?

8. Discuss the methods of geodesic levelling.

9. What do you understand by the "phase" of a station in geodetic work? (*a*) Obtain the correction for bright phase.

10. Three stars were observed, for clock error, with a transit instrument on March 9th, 1888, at Montreal.

$\delta =$	62° 22′	7° 56′	45° 7′	$c = -0^s.59$
T =	10h 56^m 34^s.45	10h 59^m 0^s.80	11h 3^m 7^s.90	$b = +\ 0.06$
$a =$	10 56 50.48	59 15.33	3 23.11	

(*a*) 11h 9^m 26^s on a mean time clock corresponded to 10h 28^m 0^s on the sidereal clock used in this observation. Assuming the rate of a sidereal clock to be zero; determine the error of the mean time clock on 75th meridian standard time. The longitude is 4h 54^m 18^s.54.

B.A. Sc. EXAMINATION.

GEODESY AND PRACTICAL ASTRONOMY.

Saturday, March 17th.

Examiner,.....C. H. McLeod, Ma.E.

1. In computing the length and direction of a line joining the points on a sphere, show that

$$y'' = (l - l') - \tfrac{1}{2} \sin 1'' \, x''^2 \tan l$$

where y'' is the portion of the meridian between the station of which l is the latitude and the foot of the perpendicular on this meridian from the other station of which l' is the latitude; and x'' is the perpendicular.

2. When an obstacle, such as a river, occurs in the measurement of a base line, how do you proceed? Obtain a formula for computing the distance across the obstacle.

3. In trigonometrical levelling, the zenith distance was measured at one of the stations only. What are the other quantities to be noted? Obtain a formula for computing the difference in elevation of the stations.

4. Describe in detail the measurement of an angle in a primary triangulation survey, and show how the result is corrected. Assume that the

other parts of the triangle are known and the observations which have been made in the measurement of the other angles in your possession.

5. How is the distance between stations, in a triangulation survey, governed by the height of the signals. Express the connection by a formula.

6. Explain the construction of maps on the equidistant polyconic method.

7. What is the spherical aberration, and what is the chromatic aberration of a lens?

8. Explain how you would find the angular value of one revolution of the screw in a filar micrometer.

9. Show by a sketch an arrangement for causing a clock to "break circuit." Why is a "break" preferable to a "make" circuit in the use of a Chronograph.

10. Show that, in the transit instrument,

$$a = T + \Delta T + m + n \tan \delta + c \sec \delta$$

and obtain ΔT from the following data:— $b = -0^{s}\cdot 10$

	LAMP WEST.			LAMP EAST.		
$\sec \delta$ =	1.15	1.00	2.14	1.00	2.93	1.30
$\tan \delta$ =	0.57	0.08	1.89	0.11	4.03	0.84
	h m s	m s	m s	m s	m s	m s
T =	21 9 42.58	11 45.86	17 27.70	27 12.86	28 50.31	34 1.82
	h m s	m s	m s	m s	m s	m s
a =	21 8 9.20	10 12.21	15 54.36	25 38.44	27 13.54	32 26.99

11. To what errors are the pivots of a transit instrument liable? How are they investigated?

12. Show that

$$\frac{\sin z}{\sin z'} = 1 - \rho \sin \pi \cos (\phi' - \delta)$$

where z and z' denote the moon's true and apparent zenith distances; π its equatorial horizontal paralax; ϕ' the geocentric latitude of the place of observation, and ρ its geocentric distance.

13. Show how to apply the transit instrument to the determination of latitude by observation in the prime vertical, and obtain a general formula therefor.

METEOROLOGY.

SATURDAY, MARCH 17TH, 1888.

Examiner,..... C. H. MCLEOD, MA.E.

1. Name and describe the thermometer ordinarily employed in meteorological observations.

2. Show by a sketch what you would consider to be about the probable average curve of diurnal range of temperature for Montreal in July.

3. Distinguish between "diathermanous" and "athermanous" substances, and give some examples of each.

4. Under what conditions is terrestrial radiation most active?

5. If the diameter of the tube and the cistern in a Marine Barometer are respectively 0.25 in. and 1.25 in., what is the length of the "inches" on the scale?

6. Describe an instrument for the experimental determination of dew point. What do you understand by "relative humidity?"

7. How is vapor contained in the air, how is it distributed, and what influence has it on temperature?

8. How is rainfall measured? How is snowfall measured and reduced?

9. What do you understand by Ozone, and why has its observation fallen largely into disuse?

10. Show by a sketch a solar halo with parhelia, marking on it the principal dimensions.

FIRST YEAR IN APPLIED SCIENCE.

CHEMISTRY.

MONDAY, APRIL 16TH:—MORNING, 9 TO 12.

Examiners, ... { B. J. HARRINGTON, B.A., Ph. D.
NEVIL N. EVANS, B.A.Sc., A. CAN. SOC. C.E.

1. How many litres of Carbon Dioxide are condensed in a cubic decimetre of Limestone (sp. gr. = 2.7)?

2. Define Quantivalence and give the Quantivalence of Carbon, Iron, Aluminium, Mercury, Antimony and Lead.

3. How would you distinguish (*a*) a Ferrous from a Ferric Salt, (*b*) a Mercurous from a Mercuric Salt, (*c*) a Stannous from a Stannic Salt?

4. What are group reagents? Give the names and formulæ of those ordinarily employed in testing for the metals.

5. Define the term allotropic. Name and characterise briefly the allotropic forms of Carbon.

6. Give equations representing the changes that take place in any two of the following cases:—(*a*) When a solution of Barium Nitrate is added to one of Aluminum Sulphate, (*b*) when a solution of Lead Acetate is added to one of Potassium Chloride, (*c*) when Tartaric Acid is added to a solution of Acid Sodium Carbonate, and (*d*) when Sulphuric Acid and Copper are heated together.

7. How many litres of Hydrogen Sulphide are evolved when 50 grammes of Ferrous Sulphide are dissolved in Hydrochloric Acid?

8. Give the names of eight of the following substances:—

$K_2 Pt Cl_6$. $(NH_2 Hg_2) Cl$. $Na_2B_4O_7$. $(H_4N) NaHPO_4$. SO_2
$H_2 Si F^6$. $C^2 H_5 OH$. $CHCl^3$. $C^2 H_4 O^2$. CO.

9. Name the substances employed in preparing any five of the following:—Ammonia, Laughing Gas, Nitrogen, Ferric Hydrate, Phosphine, Chlorine.

10. Name the principal Sugars and describe the manufacture of one of them.

11. What are the constituents of ordinary Baking-Powders? Explain their action by means of equations.

SECOND YEAR IN APPLIED SCIENCE.

(Chemistry Course.)

PRACTICAL CHEMISTRY.

MONDAY, APRIL 16TH:—MORNING, 9 TO 12.

Examiner,.....B. J. HARRINGTON, B.A., PH.D.

1. What metals yield films on porcelain? How may the films be distinguished?

2. Barium Carbonate is added to a neutral solution of Ferric Chloride. What takes place? Give the equation.

3. What compounds are formed when the Sulphides of Arsenic and Antimony are dissolved in Ammonium Sulphide?

4. A sample of Blue Vitriol is supposed to contain Sulphates of Iron, Zinc and Magnesium. How would you ascertain whether such is the case?

5. Zinc and Hydrochloric Acid are added to a solution of Sodium Sulphite. What takes place?

6. How would you detect Cadmium in a solution which also contained Arsenic and Copper?

7. How would you distinguish a Phosphate from an Oxalate, a Chlorate from a Nitrate, a Nitrate from a Nitrite?

8. What takes place (*a*) when a solution of Stannous Chloride is added to one of Mercuric Chloride, and (*b*) when an Acetate is heated with strong Sulphuric Acid and Alcohol?

9. What are the principal insoluble bodies, and how are they identified?

10. 20 grammes of Bromine are dissolved in solution of Caustic Soda. How much Sodium Bromide and Bromate are produced?

SECOND AND THIRD YEARS IN APPLIED SCIENCE.

(*Chemistry Course*) AND THIRD YEAR ARTS (*Add. Dept.*)

ORGANIC CHEMISTRY.

THURSDAY, APRIL 12TH:—MORNING, 9 TO 12.

Examiner,.....B. J. HARRINGTON, B.A., PH D.

1. By what reactions may Paraffins be obtained? Give examples of Isomerism in the Paraffin Series.

2. What do you you understand by the Iodoform Reaction?

3. CH_2OH CH_2OH

CH_2 CH_2 For what two bodies do these formulæ

CH_3 CH_2OH stand?

State what you know with regard to the action of oxydising agents upon each of them.

4. How is Glycerine prepared? What are its properties? How may it be separated from Gelatin or Sugar?

5. .40 gram of an organic acid gave on combustion 1.006 gram Carbon Dioxide and .178 gram water. .45 gram of the Silver salt yielded on analysis .212 gram of Silver. From these data calculate the empirical formula of the acid.

6. How is Picric Acid prepared? What are its properties? Explain its constitution.

7. How is Benzene obtained from Coal Tar?

8. How is Thiocyanic Acid obtained? Explain the use of Ammonium Thiocyanate in the volumetric estimation of Silver.

9. Explain the relationship of the Cresols to Benzene, distinguishing between the Ortho Meta and Para compounds.

10. What are Toluidines, and how are they obtained?

THIRD YEAR IN APPLIED SCIENCE.

(*Chemistry Course.*)

PRACTICAL CHEMISTRY.

MONDAY, APRIL 16TH:—MORNING, 9 TO 12.

Examiner,.....B. J. HARRINGTON, B.A., PH.D.

1. How would you detect the presence of Titanium in an Iron Ore? How estimate the quantity?

2. What is a normal solution? In preparing normal solutions of the following substances what quantities would you employ:—Sodium Carbonate, Potassium Carbonate, Crystallized Oxalic Acid, Sodium Phosphate, Sodium Chloride, Silver Nitrate?

3. How would you estimate the Phosphoric Acid in a specimen of Apatite either by means of Ammonium Molybdate or Uranium Acetate?

4. 1 gram of Calcium Carbonate is dissolved in Hydrochloric Acid. How much Calcium Chloride is produced, and how much Ammonium Oxalate will be required to precipitate the whole of the Calcium as Oxalate

5. 5 grams of Potassium Permanganate are dissolved in 1 litre of Water. How much Iron does each cubic centimetre correspond to?

6. How would you estimate the available Chlorine in a sample of Bleaching Powder?

7. In the valuation of a sample of Pyrolusite with Sodium Oxalate and Sulphuric Acid 3 grams of ore were employed. The loss of weight due to escape of Carbon Dioxide was 2.8 grams. What percentage of MnO^2 did the sample contain?

8. Give a scheme for the analysis of a specimen of Copper Pyrites.

9. Describe any method for the volumetric estimation of Copper.

10. An organic body containing Nitrogen was heated with Soda-lime, and the Ammonia evolved collected in Hydrochloric Acid. The precipitate obtained with Platinic Chloride weighed 1.116 grm. What was the weight of Nitrogen in the compound?

11. How may the quantity of Chlorine in a potable water be estimated volumetrically?

FACULTY OF APPLIED SCIENCE.

B.A.Sc. (*Chemistry Course.*)

CHEMISTRY.

SATURDAY, APRIL 21ST:—MORNING, 9 TO 12.

Examiner,.....B. J. HARRINGTON, B.A., Ph.D.

1. How may the constitution of basic salts be explained? Give illustrations.

2. 40 grammes of Tin were dissolved in Hydrochloric Acid and Chlorine passed into the solution until the Stannous was entirely converted into Stannic salt. What volume of Hydrogen was evolved in the first instance, and what volume of Chorine absorbed in the second?

3. Sulphurous Anhydride is passed into an aqueous solution of Cupric Chloride. What takes place? Give the equation.

4. $C_2H_2Cu_2O$. How is this compound prepared? What are its properties?

5. Explain the estimation of Cane Sugar with Laurent's polarimeter. If the sugar is dark in colour how is the solution decolourised?

6. What do you understand by the *flashing-point* of Petroleum? How is it determined? What are the principal sources of error to be guarded against?

7. How is Nitro-benzene prepared, and what are its properties? How would you analyse it quantitatively?

8. How is Oxamide prepared? What takes place when the Oxamide is boiled with solution of Caustic Potash? Give equations.

9. How is Ethyl Acetate prepared? What takes place when it is treated with Caustic Soda.

10. .40 grm. of an organic body containing Carbon, Hydrogen and Oxygen gave on combustion 0.587 grm. of Carbon Dioxide and 0.238 grm. of Water. The vapour-density was found to be 30.05. Calculate the percentage, composition and molecular formula of the body.

B.A.Sc. (*Courses in Chemistry Mining and Mechanical Engineering*).

METALLURGY.

SATURDAY, APRIL 14TH:—MORNING, 9 TO 12.

Examiner,.....B. J. HARRINGTON, B.A., PH.D.

1. State what you know with regard to the effect of change of temperature in altering the tenacity of metals.

2. Explain Wollaston's method of wire-drawing.

3. What do you understand by liquation and cementation? Give examples.

4. Draw a vertical section of a modern blast-furnace for Iron-smelting, showing as many details as possible and giving dimensions.

5. What are the principal causes determining (*a*) the production of grey or white Iron in the blast-furnace, and (*b*) the colour and degree of fusibility of the slags?

6. What substances are known to induce cold-shortness and red-shortness in wrought Iron?

7. What is Steel?

8. What characteristics should be possessed by Pig-Iron for conversion into Steel by the basic process? Explain this process.

9. Describe Gjer's kiln for the calcination of Iron Ores.

10. What is malleable cast Iron? How is it obtained?

11. Describe Claudet's process for the extraction of Silver from certain Copper liquors.

12. Discuss the principles involved in the smelting of sulphuretted Copper Ores.

13. Name the principal wet processes for the extraction of Copper, and describe one of them.

14. What do you understand by air-reduction processes for the smelting of Lead Ores? Describe one of them.

FACULTY OF APPLIED SCIENCE.

B.A.Sc. (*Mining and Chemistry Courses.*)

ASSAYING.

THURSDAY, APRIL 19TH:—MORNING, 9 to 12.

Examiner,.....B. J. HARRINGTON, B.A., PH.D.

1. How would you ascertain the quantities of Sulphur, Lead, and Iron in a specimen composed of Galena and Iron Pyrites?

2. Describe the scorification assay for Gold and Silver, stating carefully the manner of regulating the charges for ores of different character.

3. Point out the relative advantages and disadvantages of dry and wet Lead assays.

4. State fully the precautions to be observed in sampling ores.

5. How would you estimate the Zinc in a sample consisting of Stibnite, Pyrite and Zinc Blende, with Calcite as gangue?

6. In the cupellation of 20 grammes of Lead containing 0.50 p.c. of Silver, how many grammes of Litharge are produced, and what volume of Oxygen is absorbed?

7. What are the principal points to be ascertained in the valuaton of mineral fuels?

8. How would you determine the quantity of Gold in a sample of Auriferous Pyrites?

9. Under what circumstances would the presence of Titanium in an Iron Ore interfere with the assay by Potassium Permanganate?

10. 5 grammes of Potassium Permanganate are dissolved in 1 litre of water. How much Ferrous Sulphate will 20 c. c. of the solution convert into Ferric Sulphate?

11. State carefully how you would ascertain the value of the ores represented by the specimens before you.

pectora quorum, inter fluctus arrecta, iubaeque
sanguineae exsuperant undas, pars cetera pontum
pone legit, sinuatque immensa volumine terga;
fit sonitus, spumante salo. Iamque arva tenebant,
ardentesque oculos suffecti sanguine et igni,
sibila lambebant linguis vibrantibus ora.

2. Explain the construction of the following passages in extract (*a*):—(1) manus juvenem post terga revinctum. (2) certæ occumbere morti. (3 Shew clearly the distinction between majus and magis at the beginning of extract (*b*). (4) What case is miseris and why?

3. Translate carefully and explain, where necessary, the following:—(1) Ducendum ad sedes *simulacrum*, orandaque divae *numina* conclamant. (2) mediæque minans illabitur urbi. (3) pedibusque rotarum subjiciunt lapsus. 4) *diffugimus* visu exsangues. (5) Omina ni repetant Argis. (6) Dum vela darent. (7) Suspensi Eurypylum *scitantem* oracula Phœbi. (8) Nunc cassum lumine lugent.

4. Derive the words underlined in question 3.

1. Translate, Cæsar, Bell. Gall. Bk. I.:—

(*a*) Legatos ad eum mittunt qui *dicerent*, "*Sibi* esse in animo, sine ullo maleficio iter per Provinciam facere, propterea quod aliud iter haberent nullum: rogare, ut ejus voluntate id *sibi* facere *liceat*." Cæsar, quod memoria tenebat, Lucium Cassium Consulem *occisum*, exercitumque ejus ab Helvetiis pulsum et sub jugum missum, *concedendum* non putabat: neque homines *inimico animo*, *data facultate* per Provinciam *itineris faciundi*, temperaturos ab injuria et maleficio existimabat. Tamen, ut spatium intercedere posset, dum milites, quos imperaverat *convenirent*, legatis respondit, "diem se ad deliberandum sumpturum; si quid vellent, ante diem Idus Apriles reverterentur."

(*b*) Cæsar loquendi finem fecit, seque ad suos recepit; suisque imperavit, ne quod omnino telum in hostes rejicerent. Nam, etsi sine ullo periculo legionis delectæ cum equitatu prœlium fore videbat, tamen committendum non putabat, ut, pulsis hostibus, dici posset, eos ab se per fidem in colloquio circumventos. Posteaquam in vulgus militum elatum est, *qua arrogantia* in colloquio Ariovistus usus *omni Gallia Romanis* interdixisset, impetumque in nostros ejus equites fecisse, eaque res colloquium ut diremisset: multo major alacritas studiumque pugnandi majus *exercitu* injectum est.

2. Show carefully the construction of the words printed in Italics in extracts (*a*) and (*b*).

3. What is meant by *Oratio Recta* and *Oratio Obliqua*. Illustrate your answer from the above extracts.

4. Parse the following words:—Sponte, nuntiatum esset, faciundi, posteaquam (what is the quantity of the penultimate of this word?), usus,

diremisset, transeant, obsidibus, repertæ sunt," quamobrem, processisset, commeatus, sæpenumero, laturos.

5. Translate, Cicero in Catilinam, Orat. I.:—

Magna dis immortalibus habenda est atque huic ipsi Iovi Statori, antiquissimo custodi huius urbis, gratia, quod hanc tam taetram, tam horribilem tamque infestam rei publicae pestem totiens, iam effugimus. Non est saepius *in uno homine* summa salus periclitanda rei publicae. Quam diu mihi consuli designato, Catilina, insidiatus es, non publico me praesidio sed privata diligentia defendi. Quum proximis comitiis consularibus me consulem in campo et competitores tuos interficere voluisti, compressi conatus tuos nefarios amicorum praesidio et copiis, nullo tumultu publice concitato: denique, quotienscumque me petisti, per me tibi obstiti, quamquam videbam perniciem meam cum magna calamitate rei publicae esse coniunctam.

6. (*a*) Explain the personal reference of the words in Italics in the above ext. (*b*) *Ante diem duodecimum kalendas Novembris*:—Explain the construction, and state which noun the proposition *ante* governs:—What part of speech and what case is Novembris? Name the divisions of the Roman month, and the days on which they respectively commenced.

---

1. Write the *Perfect Indic.* (1st Sing.), *Supine* and *Present Infin.*:—of stringo, ordior, fallo, impello, tondeo, steruo, peto, pasco, figo, uro, necto, seco, scindo, lugeo, cano, contingo, scpelio, cædo.

2. What case, or cases, follow potior, misereor, miseror, hæreo, obliviscor, juvo, credo, reddo?

3. Distinguish quisquis, quis, qui, quidam, alter, alius, neuter, uter uterque.

4. (*a*) Decline dies in the *Singular Number*, mentioning the various forms of the genitive case. (*b*) Give the *Genitive* and *Dative Singular* and the gender of cardo, sermo, pulvis, cælum, locus, sacerdos, abies, sidus, pecus (a sheep), sus, and testudo.

5. (*a*) Compare nequam, dives, pius, æquus. (*b*) Distinguish, giving instances, between *cardinal* numbers, *ordinals*, *distributives*, and *numeral adverbs*.

6. Translate into Latin:—(*a*) He was marching to Rome. (*b*) They will march to Italy. (*c*) I shall remain there all night. (*d*) He led his army by night.

GREEK.

TUESDAY, JUNE 4TH:—MORNING, 9 TO 12.

Examiners, ... { REV. GEORGE CORNISH, LL.D. / REV. CANON NORMAN, D.C.L.

1. Translate Homer, Iliad, Book IV.:—

(*a*) Ὣς ἔφατ', οὐδ' ἀπίθησε πατὴρ ἀνδρῶν τε θεῶν τε
αὐτίκ' Ἀθηναίην ἔπεα πτερόεντα προσηύδα

„ Αἶψα μάλ' ἐς στρατὸν ἐλθὲ μετὰ Τρῶας καὶ
'Αχαιοὺς,
πειρᾶν δ' ὣς κε Τρῶες ὑπερκύδαντας 'Αχαιοὺς
ἀρξωσι πρότεροι ὑπὲρ ὅρκια δηλήσασθαι."
'Ως εἰπὼν ὤτρυνε πάρος μεμαυῖαν 'Αθήνην,
βῆ δὲ κατ' Οὐλύμποιο καρήνων αἰξασα.
οἷον δ' ἀστέρα ἧκε Κρόνου παῖς ἀγκυλομήτεω,
ἠὲ ναύτῃσι τέρας ἠὲ στρατῷ εὐρεῖ λαῶν,
λαμπρὸν· τοῦ δέ τε πολλοὶ ἀπὸ σπινθῆρες ἵενται,
τῷ εἰκυῖ' ἧξεν ἐπὶ χθόνα Παλλὰς 'Αθήνη,
κὰδ δ' ἔθορ' ἐς μέσσον· θάμβος δ' ἔχεν εἰσορόωντας
Τρῶάς θ' ἱπποδάμους καὶ ἐϋκνήμιδας 'Αχαιούς.

(*b*) Ἐνθ' Ἀμαρυγκείδην Διώρεα μοῖρ' ἐπέδησεν.
χερμαδίῳ γὰρ βλῆτο παρὰ σφυρὸν ὀκριόεντι
κνήμην δεξιτερήν· βάλε δὲ Θρηκῶν ἀγὸς ἀνδρῶν,
Πείροος Ἰμβρασίδης, ὃς ἄρ' Αἰνόθεν εἰληλούθει.
ἀμφοτέρῳ δὲ τενοντε καὶ ὀστέα λᾶας ἀναιδὴς
ἀχρὶς ἀπηλοίησεν· ὁ δ' ὕπτιος ἐν κονίῃσιν
κάππεσεν, ἀμφὼ χεῖρε φίλοις ἑτάροισι πετάσσας,
θυμὸν ἀποπνείων. ὁ δ' ἐπέδραμεν ὅς ῥ' ἔβαλέν περ,
Πείροος· οὐτα δὲ δουρὶ παρ' ὠμφαλόν· ἐκ δ' ἄρα πᾶσαι
γυντο χαμαὶ χολάδες, τὸν δὲ σκότος ὄσσε κάλυψεν.

2. Parse carefully the following verbs, giving their principal parts: —βῆ, ἔηκε, ἤιξεν, ἔθορ', βλῆτο, ἀπηλοίησεν, κάππεσεν (how is this formed?), οὐτα (note the quantity of the ultimate; what therefore should be the Pres. Ind.?).

3. (*a*) For what does κὰδ stand in ext. (*a*), and why is it so written? (*b*) Define *tmesis* and *elision*, and give instances from the above extracts.

4. Explain the formation of the following words, and give Attic equivalents where you can:—χαμαί, πτόλιος, Αἰνόθεν, μίν, τηλοσε, χαμᾶζε τέττα, ἕϊο, κέν, ἔμεν, ἰφι, τίφθ'.

5. Show the government of the following words in ext. (*a*) (vs. 7), καρήνων, (10) τοῦ, (11) τῷ. ext. (*b*), (3) What is the direct object of βαλ'? (10) ὄσσε. What case and why?

6. (*a*) Give the name and scale of the metre and scan the last four verses of ext. (*b*), noting any metrical peculiarities.

7. Translate, Xenophon, Anabasis, Book I.:—

(*a*) Ἐπειδὴ δὲ παντας παρήλασε, στήσας τὸ ἅρμα πρὸ τῆς φάλαγγος, πεμψας Πίγρητα τὸν ἑρμηνέα παρὰ τοὺς στρατηγοὺς τῶν Ἑλλήνων ἐκέλευσε προβαλέσθαι τὰ ὅπλα καὶ ἐπιχωρῆσαι ὅλην φάλαγγα. οἱ δὲ ταῦτα προεῖπον τοῖς

στρατιώταις· καὶ ἐπεὶ ἐσάλπιγξε, προβαλλόμενοι τὰ ὅπλα ἐπῆεσαν. ἐκ δὲ τούτου θᾶττον προϊόντων σὺν κραυγῇ ἀπὸ τοῦ αὐτομάτου δρόμος ἐγένετο τοῖς στρατιώταις ἐπὶ τὰς σκηνάς, τῶν δὲ βαρβάρων φόβος πολὺς καὶ ἄλλοις καὶ ἥ τε Κίλισσα ἔφυγεν ἐκ τῆς ἁρμαμάξης καὶ οἱ ἐκ τῆς ἀγορᾶς καταλιπόντες τὰ ὤνια ἔφυγον· οἱ δὲ Ἕλληνες σὺν γέλωτι ἐπὶ τὰς σκηνὰς ἦλθον. Ἡ δὲ Κίλισσα ἰδοῦσα τὴν λαμπρότητα καὶ τὴν τάξιν τοῦ στρατεύματος ἐθαύμασε.

(*b*) Ἀκούσας ταῦτα ἔλεξεν ὁ Κῦρος· Ἀλλ' ἔστι μὲν ἡμῖν, ὦ ἄνδρες, ἡ ἀρχὴ ἡ πατρῴα πρὸς μὲν μεσημβρίαν μέχρι οὗ διὰ καῦμα οὐ δύνανται οἰκεῖν ἄνθρωποι, πρὸς δὲ ἄρκτον μέχρι οὗ διὰ χειμῶνα. τὰ δ' ἐν μέσῳ τούτων πάντα σατραπεύουσιν οἱ τοῦ ἐμοῦ ἀδελφοῦ φίλοι. Ἢν δ' ἡμεῖς νικήσωμεν, ἡμᾶς δεῖ τοὺς, ἡμετέρους φίλους τοίτων ἐγκρατεῖς ποιῆσαι. ὥστε οὐ τοῦτο δέδοικα, μὴ οὐκ ἔχω ὅ, τι δῶ ἑκάστῳ τῶν φίλων, ἂν εὖ γένηται, ἀλλὰ μὴ οὐκ ἔχω ἱκανοὺς οἷς δῶ ὑμῶν δὲ τῶν Ἑλλήνων καὶ στέφανον ἑκάστῳ χρυσοῦν δώσω.

8. (*a*) Explain the force of the middle voice in the words *προβαλέσθαι τὰ ὅπλα*. (*b*) State the special meaning of the particle *μὲν* in *ἀλλ' ἔστι μὲν ἡμῖν* in ext. (*b*).

9. Translate the following short sentences:—(1) *ὡς εὐτυχῶς ἔχοιεν αὐτῷ*. (Explain the meaning of an adverb with the verb *ἔχω*.) (2) *ὅτι πλείστους καὶ βελτίστους*. (3) *πρὶν αὐτοὺς κατάγοι οἴκαδε*. (Distinguish *οἴκαδε* from *οἶκοι*, and *οἰκοθεν*.) (4) *ὡς ἐμοῦ οὖν ὄντος*, (what idiom is this?) (5) *ὅτι διώκει αὐτοὺς Κῦρος τριήρεσι*. (Why is the Indicative here used?)

10. Parse the following verbs:—*παρῆλασε, προεῖπον, δέδοικα, γένηται, δῶ, ἠγάσθη, ἤχθετο, ἐπέλιπε, ἔζων, κατακεκόψεσθαι.*

---

1. Decline through all numbers:—*οἰκία, χώρα, θήρ, τέκτων, προδότης φάλαγξ*. (*b*) Decline, in combination, in the sing. only:—*τὸ μέγα σῶμα*. (*c*) Write down the *Gen. Sing.* and the *Dat. Plu.* of:—*ἀνήρ, γίγας, γυνή, δορύ, θώραξ, υἱος*. (*d*) Write down the *Gen.* and *Acc. Sing.* of:—*ἡγεμών, πατρίς, ὁδοὺς, θρίξ, ἀνώγεων, χείρ.*

2. How many classes of Adjectives are there? Give one example of each class. Write the *Comparative* and *Superlative* of:—*δεινός, ῥᾴδιος, ἰσχυρός, σαφής, ἡδύς, εὐδαίμων.*

3. Enumerate the several classes of pronouns. Decline throughout:—*τίς, ὅστις, ἑαυτοῦ, ἐγώ*. Give the Greek words for:—"to him," "to you," "we two," "ye two," "the king himself," and "the same king."

4. Define the terms *Tense, Mood, Augment, Reduplication, Stem*, as applied to verbs. Enumerate the tense-stems, and show where the real stem is found. Write down the principal parts (1st *sing.* only) of:—*πείθω, τίθημι, πίπτω, ἕπομαι, ἵημι, φέρω, λείπω, βαίνω*. What two verbs make *ἄξω* in the *Fut. Ind. Act.*, and what two have a *Future* *πείσομαι*?

FRENCH.

(GRAMMATICAL QUESTIONS.)

MONDAY, 4TH JUNE, 9 TO 11 A.M.

Examiners,..... { PROF. P. J. DAREY, M.A., LL D.
REV. PROF. COUSSIRAT, B.A., B.D

1. Explain how you translate *no* into French? Give two examples.

2. How do you form the plural of nouns ending in *al* and in *ail*? Give two examples and give three exceptions to both of those rules.

3. How do you form the feminine of adjectives ending in *et*? Give two examples and three exceptions.

4. Translate into French: To-day is the fourth of June eighteen hundred and eighty-eight. Explain fully how those numerals have to be written.

5. Write all the *demonstrative pronouns*. Illustrate by examples how they are to be used.

6. How many kindof verbs are there in French? Name them.

7. Write in full the *Imperfect Indicative*, the *Imperative*, *Present of Subjunctive* and *Preterite Anterior* of: *Etre*, *s'en aller*, *Naître* and *Mourir*.

8. Write correctly the following past participles: Ces garçons se sont *aperçu*, mais ils ne se sont pas *parlé*. Cette maison m'a *coûté* de grandes sommes. La ville que nous avons *vu* prendre s'est bien *défendu*. Explain fully the rules to write those participles.

(TRANSLATIONS.)

9. Translate into French the next, or the following extract:—

You are about to enter into the world: amongst the thousand roads which it opens to human activity, each one of you will take one. The career of some will be brilliant, that of others obscure and hidden; that will depend in great part on the position and fortune of your parents. Let those who shall have a modest part not grumble. On the other hand Providence is just, and what does not depend upon ourselves cannot be a real good, besides, our country lives by the concourse of the work of all its children, and in the mechanism of society there is no useless spring.

Lectures françaises.

9*a*. "I am very hungry," said Louis, waking up. "Very well! let us go to breakfast," replied Peter. "To breakfast! where?" "Come, come," resumed the fisherman with confidence, "come." He drags along Louis, who followed him through complacency. Seeing the pike neatly placed on fresh leaves, Louis is astonished and still doubts. "Where, when, who gave you that God-send?" cried he. And the young fisherman related the story of the fishing, in three words. Then both sat down with as much joy as appetite, ate the cooked pike with a pleasure that Louis had never experienced at the table of his father, laden with the most delicate meats.

Lectures choisies.

10. Translate in English the following extract :

Les troupes des Turcs ne sont plus aujourd'hui si formidables qu'autrefois lorsqu'elles conquirent tant d'Etats dans l'Asie, dans l'Afrique, et dans l'Europe : alors la force du corps, la valeur et le nombre des Turcs, triomphèrent d'ennemis moins robustes qu'eux et plus mal disciplinés, mais aujourd'hui que les chrétiens entendent mieux l'art de la guerre, ils battent presque toujours les Turcs en bataille rangée, même à forces inégales. Si l'empire ottoman a depuis peu fait quelques conquêtes, ce n'est que sur la république de Venise, estimée plus sage que guerrière, défendue par des étrangers, et mal secourue par les princes chrétiens, toujours divisés entre eux.

(Voltaire, Charles XII.)

(COLLOQUIAL EXERCISES.)

11. Did you ask the hatmaker for a hat?

Yes, I did. And I paid him for it, when he gave it to me.
It is quite the same to me.
Go and rest yourself, if you are fatigued.
Of all the crew there were only five saved.
The roads are now very safe.
Everyone has his burden to bear in this world.
I will thank you for a little.
I think I perceive a town in the distance.
What road is that on the left hand?
You will not be in time.

Le proverbe anglais nous dit: "Se coucher de bonne heure et se lever de bonne heure rend un homme bien portant, riche et sage."

Peut-on envoyer par la poste des lettres qui contiennent de l'argent ?

Quels sont les prix de ces articles-là ?

Apprenez-vous la musique ?—Oui, il y a trois ans que je prends des leçons.

De quel instrument jouez-vous ?—Du piano.

A quel hôtel irons-nous ?

DICTÉE (DICTATION).

MONDAY, JUNE 4TH.

Il y avait en mil huit cent douze, au neuvième régiment de ligne, un petit tambour qui n'avait que dix ans. C'était un enfant de troupe qui s'appelait Frolut de son véritable nom, mais que les soldats avaient surnommé *Bilboquet*. En effet, il avait un corps si long, si maigre et si fluet, surmonté d'une si grosse tête, qu'il ressemblait assez à l'objet dont on lui avait donné le nom.....On riait beaucoup de lui, qui ne riait de personne. Aussi avait-il dans ses habitudes un fond de sauvagerie et d'éloignement bien rare à son âge.

GERMAN.

WEDNESDAY, 6TH. JUNE,—MORNING, 9 TO 10-30.

Examiner, ... PROF. MACKGRAF, M.A.

(1). Translate any two of the following extracts;—

(A) "Was hör 'ich draußen vor dem Thor,
Was auf der Brücke schallen?
Laß den Gesang vor unserm Ohr
Im Saale wiederhallen!"
Der König sprach's, der Page lief
Der Knabe kam, der König rief
Laßt mir herein den Alten!

.....

Der Sänger drückt die Augen ein
Und schlug in vollen Tönen
Die Ritter schauten muthig drein
And in den Schooß die Schönen.
Der König, dem das Lied gefiel,
Ließ ihm zu ehren für sein Spiel
Eine goldne Kette reichen.

.....

Ich singe, wie der Vogel singt
Der in den Zweigen wohnet;
Das Lied, das aus der Kehle dringt,
Ist Lohn der reichlich lohnet;
Doch darf ich bitten, bitt ich eins
Laßt mir den besten Becher Weins
In purem Golde reichen.

(B) Ein Reisender erzählte eins mals voller Ernsthaftigkeit in einer Gesellschaft, daß er alle fünf Weltheile durchreis't, und daß er unter andern Seltenheiten eine angetroffen habe, die noch von keinem Schriftsteller erwähnt worden sei. Dies Wunder war nach seiner Behauptung eine Kohlstande, die so groß und hoch gewesen war, daß unter einem einzigen Blatte derselben sich fünfzig bewaffnete Reiter hätten in Schlachtordnung stellen und ihre Manövres machen können. Jemand, der ihm zuhörte, hielt diese Uebertreibung keiner Widerlegung werth, sondern sagte ihm mit der größten Fassung und Kälte, daß er auch gereis't und bis nach Japan gekom;

men sei, wo er zu seinem Erstaunen mehr als dreihundert Kupfer schmiede an einem großen Kessel habe arbeiten sehen, in demselben hatten sich fünfhundert Menschen befunden die ihn glatt gemacht hätten.

(C) Willst, feiner Knabe, du mit mir gehn
Meine Töchter sollen dich warten schön;
Meine Töchter führen den nächtlichen Reihn
Und wiegen und tanzen und singen dich ein.

Mein Vater, mein Vater und siehst du nich dort
Erlkönigs Töchter am düsteren Ort?
Mein Sohn, mein Sohn, ich seh'es genau
Es scheinen die alten Weiden so grau.

Ich liebe dich, mich reizt deine schöne Gestalt,
Und bist du nicht willig, so brauch ich Gewalt.
Mein Vater, mein Vater, jetzt faßt er mich an!
Erlkönig hat mir, ein Leids gethan!

Dem Vater grauset's, er reitet geschwind,
Er hält in Arme das ächzende Kind,
Erreicht den Hof mit Müh' und Noth;
In seinen Armen das Kind war todt.

2. Compare;—arm, gut, viel, nahe, klein, hoch.

3. Give the principal parts of;—liegen, sehen, schneiden, sinken, lassen, bringen.

4. Decline in full;—dieser gute Mann, welche kleine Nadel, jenes arme Thier.

5. Write the cardinal numerals from 1 to 20.

6. Translate into English;—

Meine Handschuhe sind nicht so neu als die meines Bruders. Ich habe schon seit drei Stunden gegessen. Haben wir ein Dutzend Stühle bei dem Kaufmann unsers Onkels gekauft? Können Sie mir sagen um wieviel Uhr Ihr Vetter kommen wird? Geben Sie dieses Brod einem armen Kinde. Wollen Sie kaltes oder warmes Wasser um die Messer und Gabeln zu putzen? Dieser junge Mann ist in seiner Klasse sehr fleißig geworden; er hat großen Lob von seinen Lehrern gewonnen.

ENGLISH LANGUAGE.

WEDNESDAY, JUNE 6TH:—AFTERNOON, 3.30 TO 5.

Examiners, ... { J. CLARK MURRAY, LL.D. / REV. PROF. READ, M.A. / PAUL T. LAFLEUR, M.A.

Do the analysis prescribed in Division I., and answer any three questions from each of the Divisions II. and III.)

I.

Analyse and parse the underlined words in *either* of the following sentences:—

(*a*) Tell the boy who is reading *the* book *that* lies on *that* table, *that the* sooner he comes, *the* better; (*b*) *So* the doctrine *be but edifying*, we need not be *sore* afraid, though there should be a want of exactness in the *reasoning*.

II.

1. Explain, and illustrate by an example of each, either (*a*) the different modes of distinguishing sex, or (*b*) the different modes of forming the plural.

2. Write a note on the etymology of any *four* of the following words:—either, lesser, better, worse, neither, farther, erst, last, chiefest.

3. Define Case, Person, Mood, Voice, Tense.

4. Explain the formation of any *four* of the following:—cunning, uncouth, must, paid, ought, the nonce, rather, because, albeit.

5. Explain the derivation and force (*a*) of any *two* of the following prefixes:—*be*dew, *for*get, *gain*say, *per*mit, *com*pose; and (*b*) of any *two* of the following suffixes:—thral*dom*, weal*th*, dar*ling*, strength*en*, eat*able*.

III.

1. In what sense is language a gift of God?

2. Point out the deterioration of meaning in any *four* of the following words:—knave, villain, boor, ringleader, crafty, artful, tinsel.

3. Explain the historical facts preserved in any *three* of the following words:—pagan, heathen, sacrament, legend, dunce, galvanism.

4. Explain what is meant (*a*) by synonyms, (*b*) by desynonymising and illustrate by an example of each.

ENGLISH LITERATURE.

SATURDAY, 2ND JUNE:—MORNING, 10.30 TO 12.

Examiners, ... { REV. J. CLARK MURRAY, LL.D. / REV. P. C. READ, M.A. / PAUL T. LAFLEUR, M.A.

N.B.—Answer *five* questions, including one each from B and C.

A.

1. Give the authors and dates of:—Divine Emblems, Pastime of Pleasure, Palace of Honour, Cato, Christabel, Tristram Shandy.

2. Illustrate the effect on English Literature of (1) Politics, (2) Religion.

3. A short account of the life and writings of Pope *or* Wordsworth.

4. Give a short description of any two great prose works belonging to the seventeenth century.

B.

5. Explain:—wonned, kerne, bosky, shame-faced, buxom, pennon, Gæl, Taghairm, cabala, "waned crescent."

6. Give some account of the two chief historical characters mentioned in the "Lady of the Lake."

C.

7. Explain, with reference to the context:—a peevish schoolboy; these jigging fools; gracious drops; here wast thou bayed, brave heart; reason to my love is liable; is it physical? the falling sickness; deck'd with ceremonies; being so fathered; infants quartered with the hands of war.

8. Note any anachronisms in the play of "Julius Cæsar," *or* give a sketch of the facts upon which the play is founded.

HISTORY.

TUESDAY, 5TH JUNE:—AFTERNOON, 2 TO 3.30.

Examiners,..... | REV. J. CLARK MURRAY, LL.D.
REV. P. C. READ, M.A.
P. T. LAFLEUR, M.A.

(Not more than six questions are to be answered, three from Division I, and three from *either* Division II. *or* Division III.; but not more than three from any one Division.)

I.

1. Who were Alcibiades, Lycurgus, Justinian, Pyrrhus?

2. Make short notes upon the following:—Olympic Festival, the Spartans as *soldiers*, Decemviri, Patricians and Plebeians.

3. Write a short account, with dates, of the First Persian expedition against Greece, giving the names of the leaders on both sides and the notable battles.

4. Tell what you know of the Second Punic War.

II.

1. Give some account of the following, with important dates:—Charlemagne, Luther, Charles the Twelfth, Mirabeau.

2. State briefly what you know of the taking of Constantinople by the Turks, and give some idea of the effects of the capture upon the rest of Europe.

3. Make brief comment on the following, and assign dates:—The Massacre of St. Bartholomew, the Pragmatic-Sanction, Guelphs and Ghibel lines, Diet of Worms.

4. Give, in short compass, the substance of the chapter entitled "Chivalry," in Collier's "Great Events."

III.

1. Write an account of the departure of the Israelites from Egypt until the building of the Tabernacle.

2. What do you know of the building of the Temple of Solomon? What other temples were subsequently built on or near the same spot?

3. State (1) the form of government among the Israelites after the death of Joshua; (2) the period of its duration; (3) the circumstances that led to the establishment of a monarchy, and to its separation into distinct kingdoms.

4. (1) Describe the circumstances connected with the Apostle Paul's conversion; (2) enumerate his writings.

GEOGRAPHY.

MONDAY, 4TH JUNE:—AFTERNOON, 3.30 TO 5.

Examiners, ... { REV. J. CLARK MURRAY, LL.D.
REV. P. C. READ, M.A.
PAUL T. LAFLEUR, M.A.

N.B.—Answer any five questions.

1. Define:—cyclone, isocheimenal lines, parallels of latitude, planet-typhoon.

2. Give the position of, and any one remarkable fact concerning:—Bushire, Swansea, Oxford, Santa Fe, Funchal, Brisbane, Limerick, Nurem, berg, Adrianople, Delhi, Ispahan.

3. Where are the following islands, or groups:—Galapagos, Marquesas, Andaman, Oleron, Socotra, Nova Zembla, Juan de Fuca?

4. Where are Lakes:—Tanganyika, Ladoga, Baikal, Malheur, Rossignol, Wollaston?

5. What is the government of:—Ceylon, Muscat, Cyprus, Morocco, Monte Negro, Hayti, Paraguay?

6. Name the counties of Ontario, or of Scotland, with their chief towns.

7. Whence does the world chiefly obtain:—wool, iron, tin, quicksilver, leather?

8. Trace the course of the River Rhine *or* Volga.

9. Give the causes of dew, rain, trade-winds, geysers.

10. A short account of Japan *or* Australasia.

GEOMETRY.

MONDAY, JUNE 4TH :—MORNING, 9 TO 10.30.

Examiners,..... { G. H. CHANDLER, M A. / W. MORRIS, B.A., LL.B.

Only 2 questions from each division to be answered.

I.

1. The angles at the base of an isosceles triangle are equal.

2. If a straight line fall upon two parallel straight lines it shall make the alternate angles equal.

3. The exterior angle of a triangle made by producing one side is equal to the two interior and opposite angles, and the three angles of a triangle are together equal to two right angles.

(*a*). Show how a right angle could be divided into six equal parts.

II.

4. If the square on one side of a triangle is equal to the squares on the two other sides, the angle opposite the first mentioned side is a right angle.

5. If a straight line be divided into any two parts, the squares on the whole line and on one of the parts shall be equal to twice the rectangle contained by the whole line and that part together with the square on the other part.

6. Describe a square which shall be equal to any rectilineal figure.

III.

7. From a given point outside a circle, draw a tangent to the circle.

(*a*). Show that two tangents may be drawn from such a point.

8. If two straight lines cut one another in a circle, the rectangle contained by the parts of the one shall be equal to the rectangle contained by the parts of the other.

9. Divide a circle into two segments so that the angle contained in one of the segments may be three times the angle contained in the other.

ALGEBRA.

MONDAY, JUNE 4TH :—AFTERNOON, 2 TO 3.30.

Examiners,..... { G. H. CHANDLER, M.A. / W. MORRIS, B.A., LL.B.

Only two questions from each division to be answered.

I.

1. Add $a^2 - 3\,a\,b - \frac{2}{3}\,b^2$, $2\,b^2 - \frac{2}{3}\,b^3 + c^2$, $ab - \frac{1}{3}\,b^2 + b^3$, and $2\,ab - \frac{1}{3}\,b^3$.

2. Show that $\frac{1}{6}\{x\,(x+1)\,(x+2) + x\,(x-1)\,(x-2)\} + \frac{2}{3}\,(x-1)\,x\,(x+1) = x^3$.

3. Resolve $x^2 - 2x - 3$, $x^2 - 4x + 3$, $x^4 - y^4$ and $48x^2 + 16x - 15$ into elementary factors.

II.

4. Show that

$$\frac{3a}{(a-2x)^2} + \frac{2a+x}{(a+x)(a-2x)} - \frac{5}{a+x} = \frac{2x(10a-11x}{(a+x)(a-2x}$$

5. Divide $\frac{4a(a^2-x^2)}{3b(c^2-x^2)}$ by $\frac{a^2-ax}{bc+bx}$, and write the quotient in its simplest form.

6. Find the square root of $9a^4 - 12a^3b + 34a^2b^2 - 20ab^3 + 25b^4$.

III.

7. Find x from the equation $\frac{4x}{5-x} - \frac{20-4x}{x} = \frac{15}{x}$.

8. Find x and y from the simultaneous equations.

$$\left.\begin{aligned} 2x - \frac{y-3}{5} &= \frac{5x-2}{2} \\ 2y - \frac{x-5}{3} &= \frac{7y-7}{2} \end{aligned}\right\}$$

9. A person spends one hour and an half in driving a certain distance at the rate of 10 miles per hour, and walking back at the rate of 4 miles per hour. What is the distance?

TRIGONOMETRY.

WEDNESDAY, JUNE 6TH:—AFTERNOON, 2 TO 3.30.

Examiners, ... { G. H. CHANDLER, M.A.
W. MORRIS, B.A., LL.B.

Only two questions from each division to be answered.

I.

1. If one angle of an equilateral triangle were taken as the unit angle, what number would represent the angle of a regular pentagon?

2. Define the sine, tangent, and secant of an angle, and find their values when the angle is 60°.

3. Explain how an angle may be geometrically constructed when the sine of the angle is given (e.g. $= \frac{3}{5}$).

II.

4. Compare the trigonometrical ratios of an angle and its supplement.

5. Given $\sin A = -\frac{1}{3}$, find $\tan A$. Why should the double sign $\pm$ appear in this result? For what values of A would you choose the sign +, and for what values the sign $-$?

6. Prove the following relations:

$$(a) \quad \sin^2 A + \cos^2 A = 1,$$

$$(b) \quad \frac{\operatorname{cosec} A}{\sec A} + \frac{\sec A}{\operatorname{cosec} A} = \sec A \operatorname{cosec} A,$$

$$(c) \quad \tan^2 A - \sin^2 A = \sin^4 A \sec^2 A.$$

III.

7. Prove that

$$(a) \quad \sin (A - B) = \sin A \cos B - \cos A \sin B,$$

$$(b) \quad \tan A - \tan B = \sin (A - B) \sec A \sec B.$$

8. Show that

$$\cos 2A = \cos^2 A - \sin^2 A = 2 \cos^2 A - 1 = 1 - 2 \sin^2 A.$$

9. At two positions 45 yds. apart, and in a horizontal line with the base of a tower, the elevations of the top of the tower are found to be 45° and 60° respectively. What is the height of the tower?

NATURAL PHILOSOPHY.

Examiner,.....Rev. Principal Adams, D.C.L.

I

1). Define force, moment of a force about a point, velocity, momentum. Give the Parallelogram of Forces with a verification.

(2). Mention the principle of the Lever. Give the 3 kinds of lever. State in which case mechanical advantage cannot be gained, and what is gained in that case instead.

(3). Show how to find the centre of gravity of a plane Triangle; also o a plane irregular Board.

II

(4). Which is the greater velocity:

100 feet per second.
100 miles per minute.
The velocity acquired by a falling body in three seconds.

(5). A body is thrown upwards with a velocity of 960 feet per second; find for how many seconds it will rise and how far it will rise; and also when it will again reach the ground.

(6). Two bodies weighing 51 and 49 grains respectively are hung by a string on opposite sides of a smooth pulley: The system starts from rest: Find the position of the system after one second has elapsed, and the velocity of both weights.

III

(7). Distinguish between elastic and inelastic fluids. Are any liquids absolutely inelastic? What property is assumed as the basis of all reasonings upon fluid action? and what is taken as the measure of fluid pressure.

(8). Explain the statement that liquids maintain their level, and give the conditions that will enable a body to float in a liquid.

(9). Explain fully the principle of the Barometer; and if the specific gravity of mercury be 13·568, show how much variation a water barometer should show for a fall of 1-10 of an inch in the mercury barometer.

Two questions from each group.

BOTANY.

TUESDAY, JUNE 5TH :—AFTERNOON, 3.30 TO 5.

Examiner,.....D. P. PENHALLOW, B.Sc.

I.

1. How may plants be distinguished as to duration?

2. Explain the nature and office of stolons and runners. Examples.

3. Explain the structure of the stamen and show its special function.

4. Show from what sources the plant obtains its food and its general character from each source.

II.

5. Explain the structure of the embryo, and show its principal variations.

6. Explain the structure of the bud, and show how many kinds there are.

7. Show how many types of venation there are, and in what classes of plants they occur.

8. Explain the structure of an apple, and show what each part corresponds to in the original flower.

III.

9. Explain, with examples:

(1) Pinnate leaf.

(2) Palmate leaf.

(3) Pinnately-decompound leaf.

(4) Stipules.

10. Distinguish between artificial and natural systems of classification, and give an outline of the latter.

11. Explain the principal forms of inflorescence with examples.

12. Give a concise account of the mode of reproduction in flowering plants.

13. Describe the plant given.

The candidate is required to answer two questions in each division number thirteen is imperative.

The examiner will kindly supply any common flower.

ELEMENTARY CHEMISTRY.

WEDNESDAY, JUNE 6TH :—MORNING ($1\frac{1}{2}$ hour).

Examiner,.....B. J. HARRINGTON, B.A., PH.D.

I

1. Distinguish between chemical and physical changes, giving several examples of each.

2. What takes place (*a*) when a piece of Sodium is thrown upon Water, and (*b*) when Steam is passed over heated Iron?

3. Give examples illustrating the use of Carbon as a reducing agent.

II

1. State and explain the laws of definite and multiple proportion.

2. How is Chlorine prepared in the laboratory? State what you know with regard to its chemical and physical properties.

3. What do you understand by families of elements? Give examples. Distinguish also between acid-forming and base-forming elements.

III

1. How is Water purified by distillation? Give a sketch of the apparatus which you would employ, and name the different parts.

2. What do you understand by neutralization? Illustrate by several examples.

3. Give equations representing the changes that take place (*a*) when Sodium Nitrate and Sulphuric Acid are heated together, and (*b*) when Nitric Acid is added to a solution of Caustic Potash.

Answer two questions in each group.

GEOMETRICAL AND FREEHAND DRAWING.

THURSDAY, JUNE 7TH :—MORNING, 9 TO 12.

Examiner,.....C. H. MCLEOD, MA.E.

Section I.

1. Trisect a right angle.

2. Construct an equilateral triangle, the vertical height of which is 2 in. and construct a rectangular figure having the same area as the triangle.

3. There is a point without the circumference of a circle. Draw a line through the point tangent to the circle.

4. There are two circles and a point P. in the circumference of one of them. Describe the circle which will touch the two given circles externally and contain the point P.

5. Within a circle of 2 in. diameter inscribe a regular octagon.

6. Construct the cycloid generated by a circle of 2 in. diameter.

Section II.

1. Complete the ornamental form of which one half is given in diagram. Make your drawing to about one-third size.

2. Sketch the conventionalized design of any leaf and of any flower, and make a design combining a leaf and flower form.

3. Place a cube in perspective, a short distance to the right, within the picture and below the level of the eye.

4. Make a freehand drawing of the objects before you as they appear from your point of view :

(*b*) The skeleton cube.

(*a*) The cone standing on a circular pedestal.

NOTE.—Answer only four of the five questions in Section II. In the problems in Section I. construction lines are to be dotted, and all results must be obtained by direct construction, not by trial. No mechanical measurement will be allowed in answering the questions in Section II.

McGILL UNIVERSITY LIBRARY

McGILL UNIVERSITY LIBRARY

McGill University Library
3 103 858 508 Q